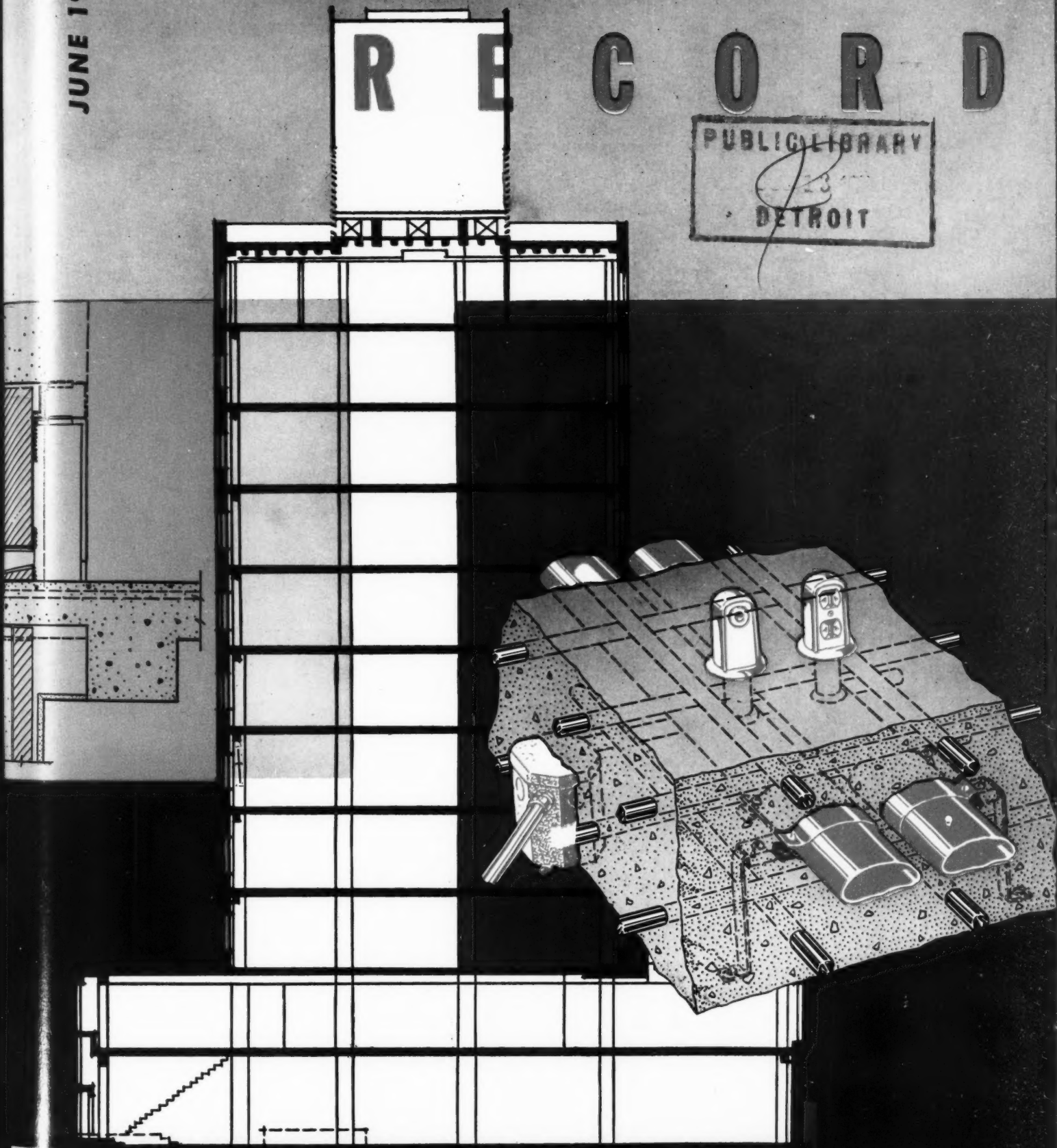


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OFFICE BUILDINGS

ARCHITECTURAL RECORD'S BUILDING TYPES STUDY NUMBER 187



FOR CLASSY SHOPS

... OR BUSY PLANTS



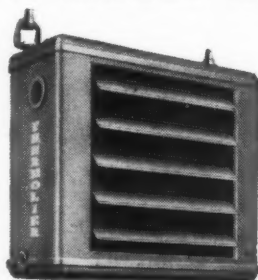
THERMOLIER UNIT HEATERS

The condensed table below is a quick guide to the selection of the correct Thermolier for specific conditions. The capacities, when motors are operating at normal speeds, are based on Standard Basis of Rating: 2 lb. steam pressure and 60° F entering air temperature.

Grinnell Thermoliers are tested and they are rated in strict accordance with rules of the Industrial Unit Heaters Association.

All Thermoliers can be operated at working steam pressures up to 125 psi and steam temp. up to 406° F.

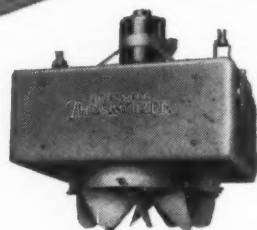
A MODEL AND SIZE FOR EVERY PURPOSE



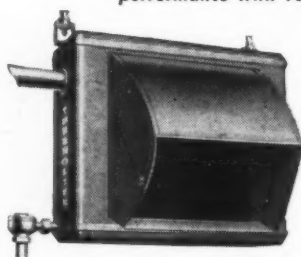
horizontal delivery



textile (horizontal delivery)



vertical delivery

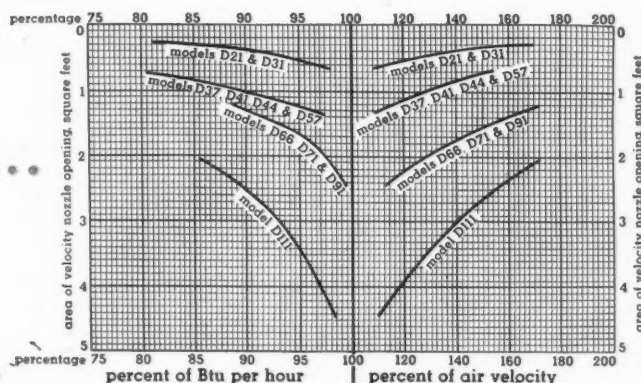


velocity nozzle (horizontal delivery)

model	total heat delivered, Btu per hr	sq ft edr (nominal)	air velocity at exit, louvers open, lin. ft. per min.
horizontal delivery			
D21	35,600	148	786
D31	48,700	203	851
D37	62,200	259	753
D41	71,000	295	901
D44	84,100	350	887
D57	101,300	422	1016
D66	128,700	536	779
D71	151,700	632	977
D91	196,000	817	985
D111	275,300	1147	1048

Textile			
TX70	69,800	291	826
TX110	113,700	474	877

vertical delivery			
VA1042	50,800	212	1399
VA1045	73,600	307	1287
VA1065	109,400	456	1354
VA1075	145,600	607	1231
VA1101	185,000	770	1495
VA1111	257,000	1071	1631



GRINNELL

THERMOLIER UNIT HEATERS

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Grinnell Company, Inc., Providence, Rhode Island

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Thermolier unit heaters • Grinnell-Saunders diaphragm valves • prefabricated piping • Grinnell automatic fire protection systems

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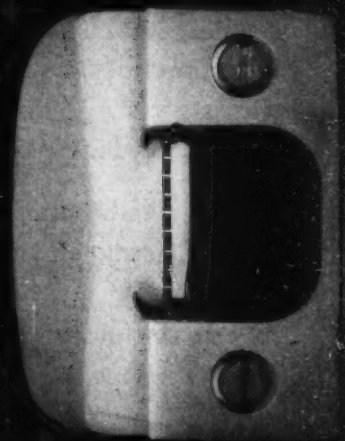
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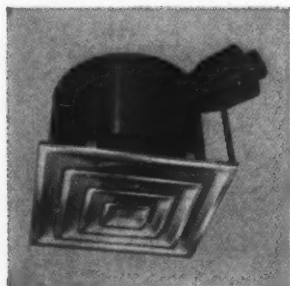
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Lever

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Contributing to the comfort, cleanliness, and efficiency of Lever House is the unique high pressure air conditioning system that delivers fresh, filtered, right-temperated air in interior as well as perimeter zones.

This high pressure system resulted in elimination of a costly penthouse on the roof, elimination of return air ductwork on each floor, and a 50% reduction in the space normally required between furred ceiling and floor above.



Tuttle & Bailey Type HPD High Pressure Supply Air Units selected for installation throughout Lever House were specially designed to handle the branch duct velocity of 3500 FPM. Supply air entering the housing from the branch duct passes through an airfoil type high pressure damper into an expansion silencer chamber where pressure is reduced from a branch duct pressure of 4" to 0.4" water gauge. A circular jet induces room air into the unit where it mixes with the primary air stream, and then discharges through the diffuser face.

Other Tuttle & Bailey equipment installed includes Type D square return air units designed to match supply diffusers . . . Type AL Aeroline return inlets . . . and, in the lobby, a special combination supply and return linear unit.



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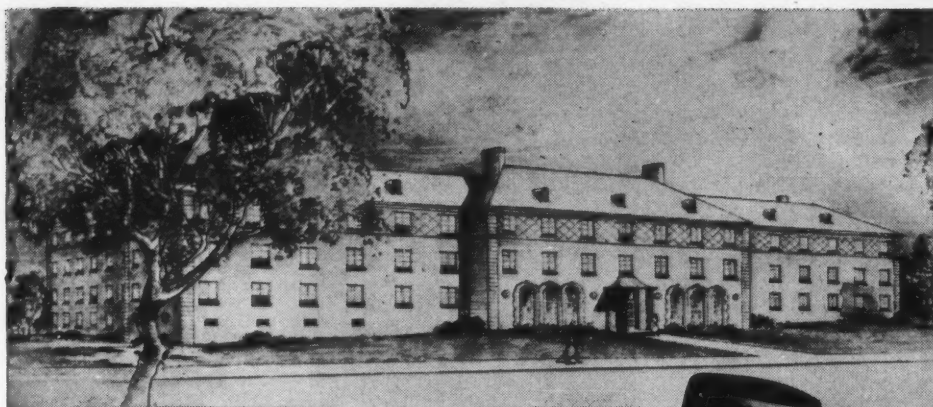
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NEW BRITAIN, CONNECTICUT





Women's Dormitory

NORTH TEXAS STATE COLLEGE

Denton, Texas

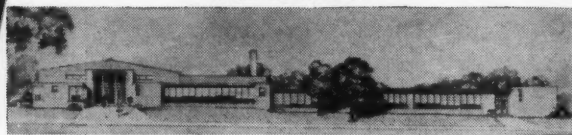
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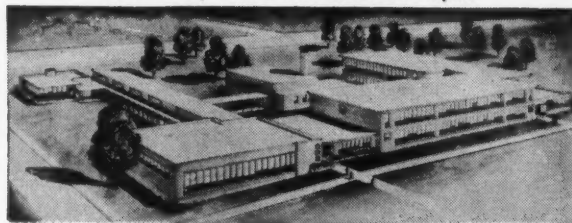
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Education Building

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ae	Viking Corporation	346
ae	Wakefield, F. W. Brass Co.	293
	Wallace, William Company	332
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The 1100 Schlage Cylindrical Locks at the Western Merchandise Mart began their record of trouble-free service in 1937. Ten years later a wing was added and 50 more Schlage Locks were installed. "We specified these on the strength of Schlage's performance in our main structure," says "The Mart's" President, Frank K. Runyan. "And we have not had to replace or repair a single lock."

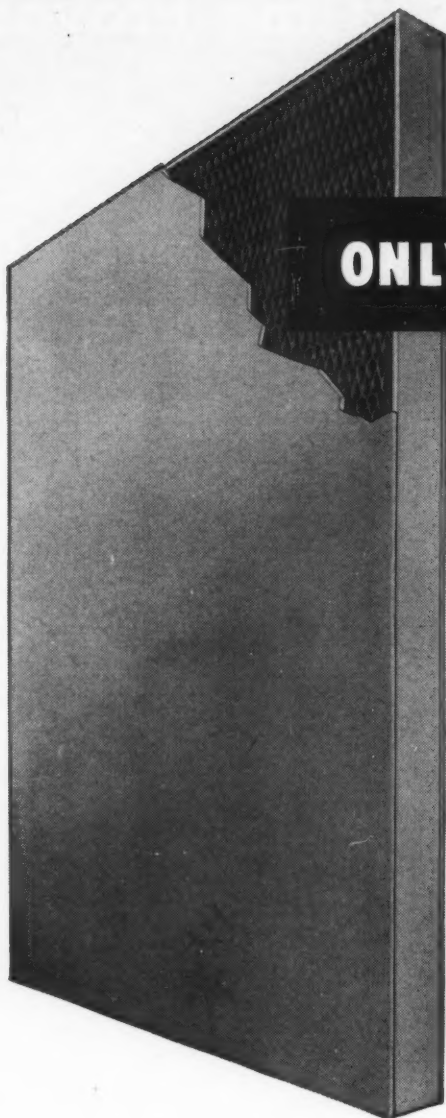
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Korweld*

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**...the ultra-modern, textured-finish
MOVABLE PARTITION PANEL**

Korweld is an *exclusive* Hauserman development. Its introduction last year followed exhaustive research by Hauserman engineers. Korweld consists of a super-strength honeycomb core, plastic-welded to facing sheets of tough, non-metallic composition board. Korweld is the term applied *only* to this latest Hauserman-engineered panel construction. All structural members, posts, cornices and baseboards are precision-rolled, heavy-gauge steel.

These are the facts about Korweld

STRENGTH:

Korweld is tough, strong and high in impact-resistance. It will not bend, chip, warp or scale. Compression strength is over 2½ tons per sq. ft.

SOUND CONTROL:

Patented Korweld construction utilizes the most advanced scientific principles of effective sound control. Can attain up to a 40 decibel attenuation value, the equal of a 5½" tile and plaster wall.

CHOICE OF COLORS:

140 standard colors enable you to match virtually any decorating scheme. Factory-applied finish never wears off even after repeated washings. Walls never require repainting.

PACKAGED UNITS:

Korweld-paneled interiors retain the *packaged unit* principle pioneered by Hauserman. Not a system of loose parts, but large pre-assembled units that assure quick, easy erection . . . fast, trouble-free moves throughout the life of every installation.

FIRE RESISTANCE:

Movable Partitions made with Korweld assure fire resistance from baseboard to ceiling. They will not support an open flame.

RIGID STEEL STRUCTURAL MEMBERS:

Korweld panels are used with the same advanced-design structural members which distinguish all Hauserman *Movable Interiors* from ordinary movable partitions.

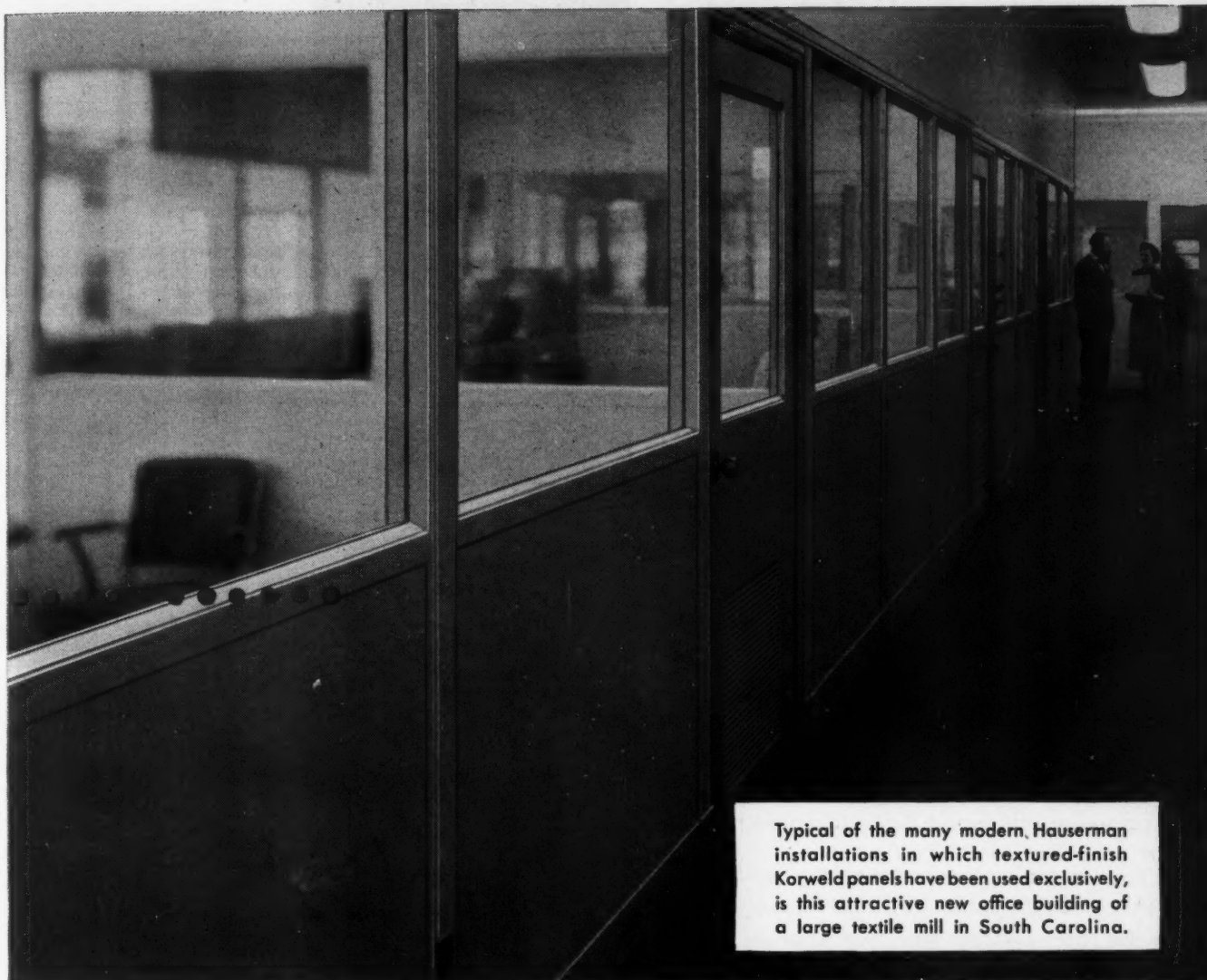
WILL NOT WARP:

Unlike other non-metallic partitions, Korweld panels are completely sealed against moisture, inside and out. They remain permanently flat . . . will not warp, bulge or buckle, regardless of climatic conditions.

LIFETIME SERVICE:

Hauserman's factory-trained service specialists are available nation-wide to assume full responsibility for everything from rearrangement of individual panels to a cross-country move of your entire installation.

*Trademark



Typical of the many modern, Hauserman installations in which textured-finish Korweld panels have been used exclusively, is this attractive new office building of a large textile mill in South Carolina.

**Only HAUSERMAN gives you the advantages of
MOVABILITY and LOW-COST MAINTENANCE
Plus your choice of Korweld or Steel Panels**

Now . . . choose either the modern textured finish of Korweld, or the smooth flat surface of all-steel panels for your Hauserman *Movable Interior*. The end result will be the same: new office efficiency . . . unlimited adaptability to changing space requirements . . . practically no maintenance cost . . . and years of complete satisfaction with the finest movable walls made.

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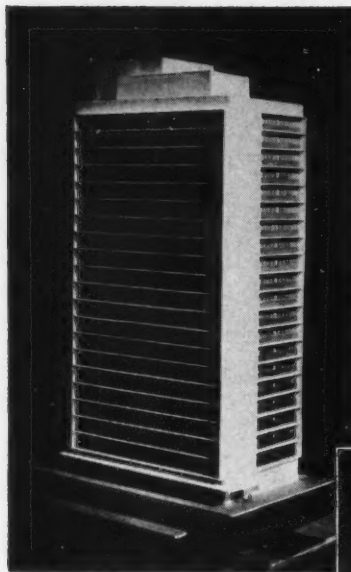


How Houston gears for electrical growth with G-E Q-FLOOR WIRING

As the skyline of Houston, Texas, grows, the requirements for expanded electric service *within individual buildings* grow. These four buildings, with G-E Q-Floor wiring, are prepared for the future—whenever the rearrangement of office or store equipment demands additional electrical service.

The steel cells of Q-Floors provide the ultimate capacity for the wires of power, signal, and telephone circuits. Outlets can be installed at any time to provide electrical facilities where needed over the entire floor area. And the provision for electrical expansion will outlast the building itself.

To provide for tomorrow's changing needs of electrical growth, specify G-E Q-Floor wiring. Write for the complete story—a copy of the *G-E Q-Floor Wiring Data Manual*. Section C4-65, Construction Materials Division, Bridgeport 2, Connecticut.



← Melrose Building

Architect: Lloyd & Morgan
Gen. Contr.: Tellepsen Constr. Co.
Consulting Engr.: Herman Blum
Elec. Contr.: Hirsh Elec. Co.
Owner: Melvin A. Silverman and Bennett Rose

This new Q-Floor building will always be ready for unforeseen changes in floor arrangements . . . changes that demand new electric outlets.

Bank of Commerce Building →

Architect: Alfred C. Finn, F.A.I.A.
Gen. Contr.: Manhattan Constr. Co. of Texas
Elec. Engr.: Reg. F. Taylor
Elec. Contr.: The Howard P. Foley Co.
Owner: The National Bank of Commerce of Houston

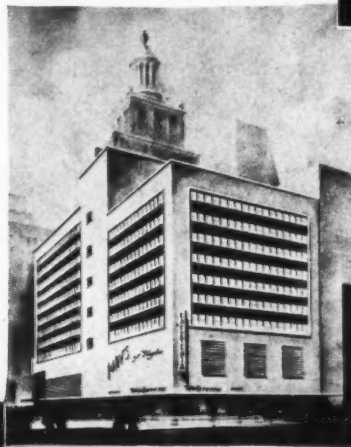
With G-E Q-Floor wiring, electric outlets can be added or relocated quickly — without disturbing this building's tenants.



San Jacinto Building

Architect: Kenneth Franzheim, F.A.I.A.
Gen. Contr.: W. S. Bellows Const. Corp.
Struct. Engr.: Ward Butterwick
Elec. Engr.: Reg. F. Taylor
Elec. Contr.: J. S. Copeland Elec. Co.
Owner: Brown-Bellows-Smith, Inc.

Dead load was reduced in the rebuilding of the San Jacinto Hotel into a modern office building. After stripping the building to its original steel frame, the heavy, arched concrete floors were replaced with Q-Floors (steel floor and raceway combined).



Sakowitz Building

Architect: Alfred C. Finn, F.A.I.A.
Interior Architect: Brochsteins Inc.
Gen. Contr.: Tellepsen Constr. Co.
Elec. Engr.: Reg. F. Taylor
Elec. Contr.: J. S. Copeland Electric Co.
Owner: Sakowitz Bros.

G-E Q-Floor wiring gives this department store complete electrical coverage for display window, show case, and office lighting.

You can put your confidence in—

GENERAL  ELECTRIC

THE RECORD REPORTS

BAN ON AMUSEMENT BUILDING ENDS JULY 1; HOUSING GETS STRUCTURALS

FOR ARCHITECTS and all of the building industry, the first birthday of the Controlled Materials Plan may well be a day to celebrate.

July 1 is the date set by the National Production Authority for a significant series of relaxations in the basic construction order, CMP Regulation Six, including the revocation of the prohibition on construction of entertainment and amusement projects, oldest (Oct. 27, 1950) of the building curbs.

On the same day, amendment of the housing construction order, NPA M-100, will provide for self-authorization of some structural steel in housing.

Major Changes Listed

These are the major amendments in prospect:

1) Revocation of the ban on amusement construction; per-quarter self-authorization of five tons of carbon steel (not more than two of structurals); 200 lb of copper; 250 lb of aluminum.

2) Increase of per-quarter commercial self-authorization, beginning October 1,

to 25 tons of carbon steel (no limit on portion of structural shapes); 750 lb of copper; 1000 lb of aluminum.

3) Revocation of restriction of aluminum to industrial and public utility construction only; aluminum to be allowed in all types of construction. From July 1 to October 1, 250 lb may be self-authorized for commercial construction.

4) Reclassification from commercial to industrial category of transportation facilities; public utility systems, water and sewage systems; administration buildings, garages and service buildings for industrial projects when owned and operated as part of the industrial project.

5) Per-project-per-quarter self-authorization of 2000 lb of stainless steel for chemical plant construction.

6) A previously-announced (ARCHITECTURAL RECORD, May 1952, page 11) increase in self-authorization allowances for schools (and roads and highways).

7) Self-authorization for housing construction of 1500 lb of new domestic structural shapes and 250 lb of aluminum

Fast Convention News

News of the 84th annual convention of the A.I.A. will get to its members fast in two special issues of *Chicago Construction News*, one of the three F. W. Dodge Corp. newspapers.

An on-the-spot staff headed by Ernest Mickel, Dodge Washington news bureau head, will report convention news in two special issues, June 24 and 30. The first will be distributed at the convention; the second will be mailed to all A.I.A. members.

in addition to the present allowance of steel and copper.

Aluminum Before Steel?

The quickening pace of aluminum decontrol and continuing evidence of easing demand for aluminum products brought reports that aluminum might after all be the first of the controlled materials to be completely "decontrolled," perhaps by Fall. Steel decontrol, once expected by the end of 1952, is now considered unlikely before the first quarter 1953.



Jules Schick

Left: symposium on architecture and the arts at A.I.A. Middle Atlantic Regional Conference at Philadelphia (story, p. 28): Roy F. Larson, A.I.A., president, Philadelphia Art Commission; Andrew C. Ritchie, Museum of Modern Art, New York City; Frederick Gutheim, assistant to A.I.A. Executive Director; Ben Shahn, mural painter; Lawrence M. C. Smith, trustee, Philadelphia Museum of Art; Oscar Stonorov, A.I.A., moderator

Right: Conference Chairman Beryl Price, Philadelphia Chapter first vice president, with national A.I.A. officers—Norman J. Schlossman, second vice president, Chicago; Kenneth Wischmeyer, first vice president, St. Louis; C. E. Silling, Middle Atlantic Regional Director, Wheeling, W. Va.; Maurice J. Sullivan, treasurer, Houston



COMPLETE NEW HOME FOR OLD UNIVERSITY TAKES SHAPE

ON THE OUTSKIRTS of Mexico City, the mammoth project known as University City is rapidly taking shape. To be no less than a complete new campus for the University of Mexico, oldest university on the continent, the finished project will include an Olympic stadium for 110,000 spectators, extensive sports and recreational facilities, and all the scholastic, administrative and residential buildings for a faculty and student body of more than 25,000.

Also on the campus will be the National Library of Mexico — to be housed in a windowless 14-story building — a giant swimming pool and a complete system of highways and bridges.

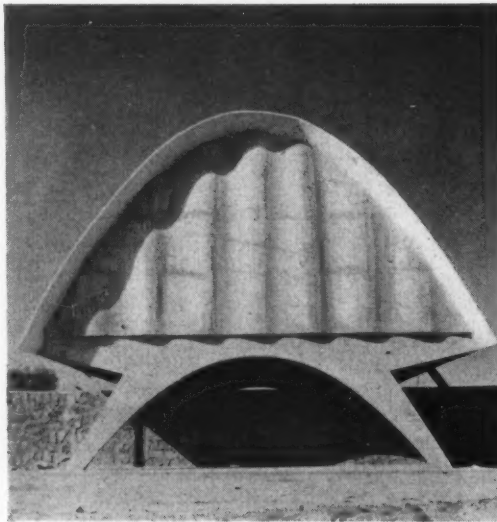
Besides the immense scope of the project, there are several other matters of special interest connected with it. One of these is the speed — a little over two years — with which it will have been completed. Another is the coordinated planning program which enabled a great number of structures in a wide range of designs to be blended into a harmonious whole, without sacrificing the individuality of the particular buildings. Still another point of interest is the age of the participating architects, who range in average age from 25 to 36.

Chief planner and coordinator for University City has been Carlos Lazo, who supervised a group of over 140 architects and engineers. Actual designing of the individual buildings was done by from one to four architects, working with engineers, advisers from the schools to be housed, and the artists engaged to design the murals and mosaics with which the project abounds. Among the artists is Diego Rivera, who is designing what is to be the world's largest mural for the exterior of the giant Olympic stadium.

In many of the buildings, extensive use was made of native earth, lava rock and tepetate, resulting in a considerable lowering of costs. The structures were largely built by previously unskilled laborers who were trained by the hundreds especially for the job so that Mexico's building industry would not be crippled by the construction of the huge project.

Major zones for University City include: Scholastic and Administrative, with complete facilities for the sciences,

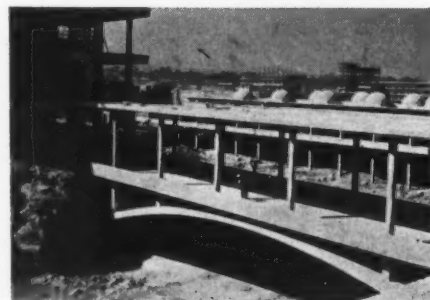
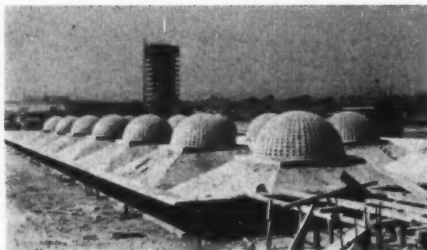
(Continued on page 364)



Building for Cosmic Ray Institute, left, shows striking handling of concrete construction. Cantilevered stairs, below left, part of same building, again demonstrate bold technique and imaginativeness of architects



Erwin G. Lang

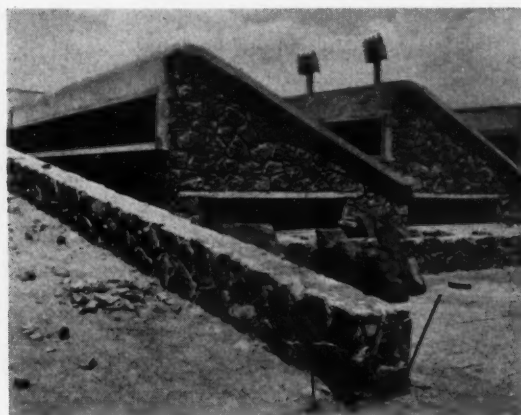


Air view, above, shows entire campus area with Olympic stadium at far right. Photo at left above shows Engineering Laboratories; skylight domes are concrete, with clear insets. Bridge, shown left, serves as connecting ramp between two other engineering buildings

IN MEXICO CITY



Frontones Building, above left, will be used for dances, meetings, other recreational purposes, has seating capacity of 3000. Like many other buildings in the project, it uses native materials, employs forms reminiscent of ancient Aztec structures. Olympic stadium, above top, seats 110,000, is built up from huge mounds of earth and tepetate. View below shows exterior details. Finished stadium will have Diego Rivera mural around entire outside wall



Large glass-walled building is Tower of Science, with adjoining mural-fronted auditorium. View at far right, taken from opposite side, shows science lecture halls, with auditorium at left and Tower in background



NEW-TYPE ARMORIES ARE DESIGNED FOR EXPANSION

THREE SERIES of flexible master plans for a new type of "expansible" armory for Army Organized Reserve Corps units have been prepared by Reisner & Urbahn, Architects, of New York, for the Army Corps of Engineers to use in its continuing construction program.

The first contracts are now being let at district offices of the Corps of Engineers for construction of 25 units in 24 cities across the country at a cost of approximately \$9 million. Completion is scheduled by the middle of 1953.

The new series makes a sharp break from the type of armory constructed in the first phase of the postwar expansion program, which produced 57 units either completed or now under construction.

More Classroom Space

Emphasis on the educational function of the armories as the modern Army requires more and more technical training for reserves is reflected in the curtailment of space given to the drill area in favor of much more space for classroom instruction.

The master plans offered are a 400-man unit, expandable by addition of prescribed sections to serve 600 and 800 men; a 600-man unit, expandable to 800 and 1000; and a 1000-man unit, expandable to 2000.

Basic Plan Is Simple

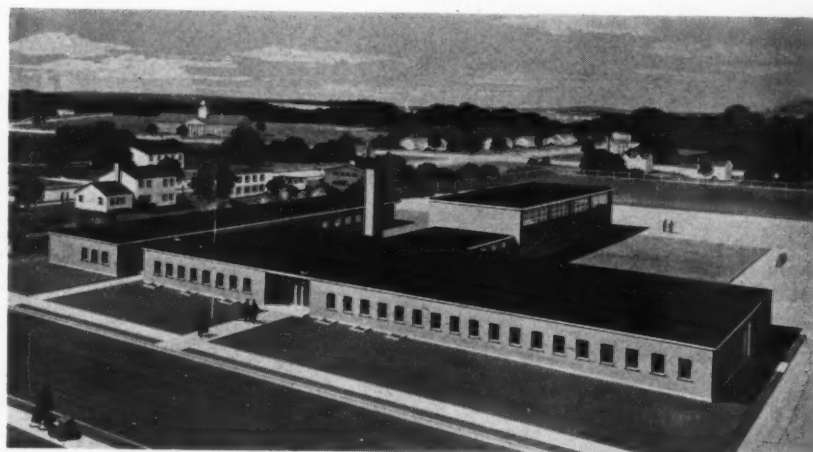
The basic plan provides an "assembly hall" (replacing the old drill hall) 70 by 50 ft and a section 170 by 50 ft which includes offices, classrooms (600 sq ft) and a rifle range 110 by 20 ft with a connecting link containing various service facilities and utility room.

Expansion is accomplished in any of the three series by addition of another "connecting link" and another section. Dimensions of the assembly hall and its connecting link and construction details of the basic units are identical for the first two series; in the third, there are two variations. Framing of the assembly hall in the 1000 unit is planned to permit doubling the size of the hall in the 2000 stage; and the rifle range is made 30 ft wide instead of 20, to permit later expansion from four firing ranges to six.

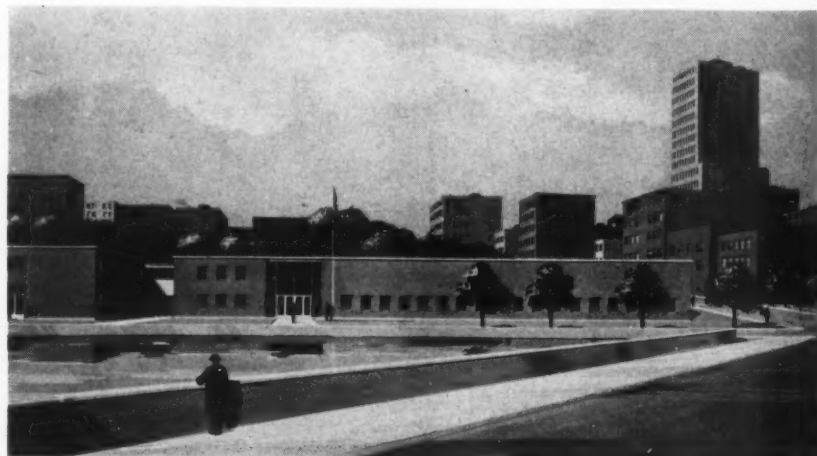
The plans include numerous variations for adaptation to local requirements—with or without basements; with coal, oil or gas heating systems; of brick or masonry on wood frame construction or (in earthquake areas) reinforced concrete.



Basic unit in the 400-600-800 man series: assembly hall is at rear. Separate building in center background is motor vehicle shed for tanks, halftracks, field equipment, etc.

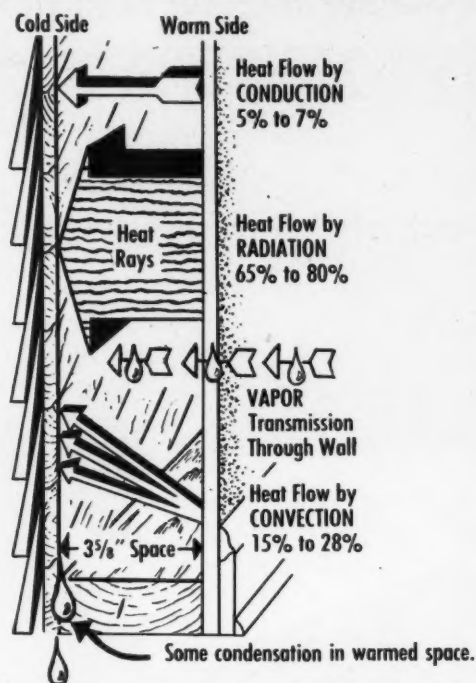


Above: basic unit in the 600-800-1000 man series has larger front section with additional classroom and other facilities in third part at left. Below: basic 1000-2000 man unit

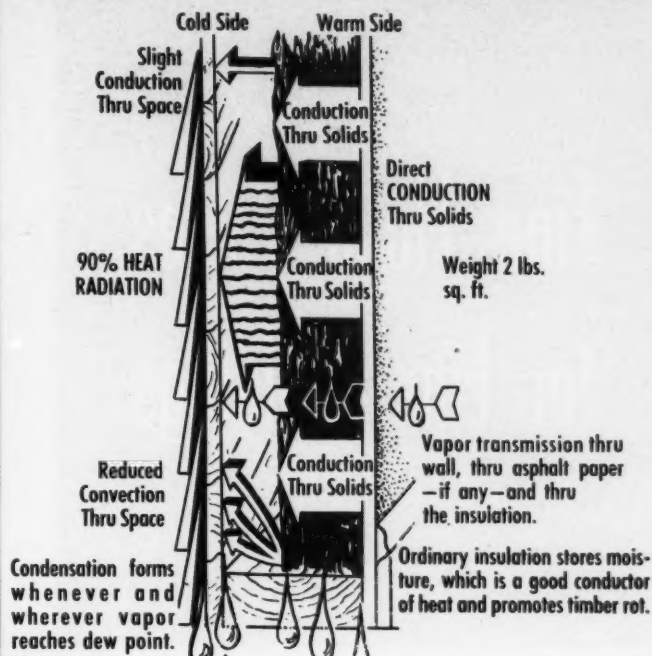


Ken Mitchell

Heat & Vapor Flow Thru Air Spaces In Non-Insulated Wall



Heat & Vapor Flow Thru Wall Space With Ordinary Insulation



For more efficient cooling and heating systems...

Performance failure by insulation unduly burdens heating and air-conditioning plants. Insulation specification is too often automatic.

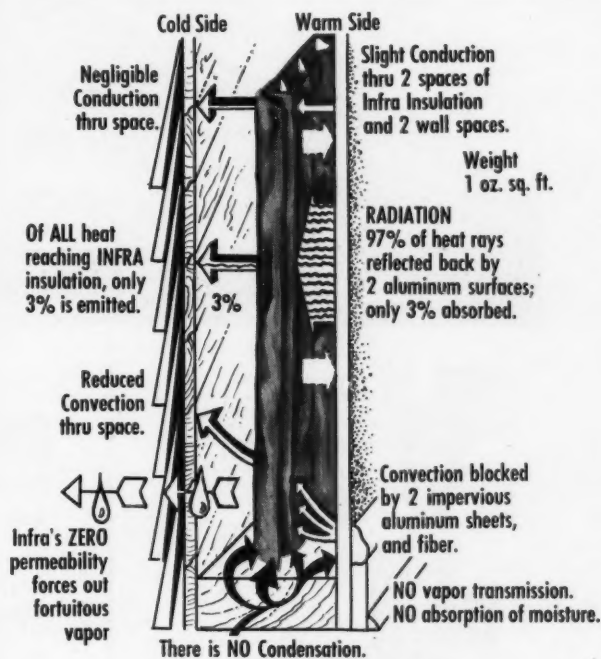
Ordinary insulation also promotes condensation, absorbs and retains moisture. Wet, it is an excellent conductor of heat, and promotes timber rot. Wet insulation tears away at points of fastening, for instance in crawl spaces, leaving the structure uninsulated.

Loose fill insulations settle down, become denser and better conductors of heat. The spaces they leave empty are deprived of the insulation originally planned.

Not all insulations perform with the same efficiency. (Consult the Chart of Thermal Insulation Values in Schwartz's "Simplified Physics of Vapor & Thermal Insulation," sent free on request. The chart shows at a glance k , C , R , and U thermal factors, of all insulations, of all thicknesses, their weights, densities, etc.)

Multiple accordion aluminum's rating is especially good, and permanent. Of all heat transferred through structural spaces, 50% to 80% is by Radiation, all but 5% of the rest is Convection. Multiple accordion aluminum sheets throw back 97% of the heat rays which strike them. They block Convection. Their insignificant mass, with multiple air space compartmentation, defeats Conduction.

The permeability of multiple accordion aluminum to water vapor, to cold and warm air and other gases, is zero. Its structure permits no dew-points to be reached on its surfaces or within it. It neither sustains nor retains moisture. It cannot deteriorate, is flame-resistant, repels insects, rodents and mold. Its commercial forms are Infra Insulation, Types 6, 4, and 4 Jr.



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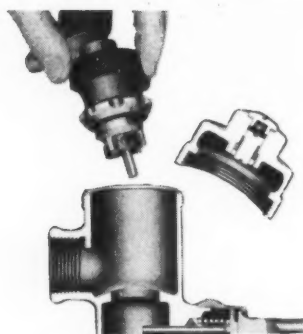
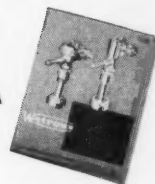
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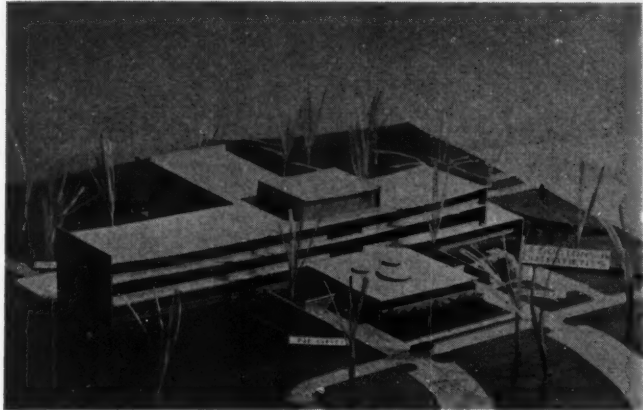
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STUDENTS SCORE IN HOSPITAL DESIGN COMPETITION

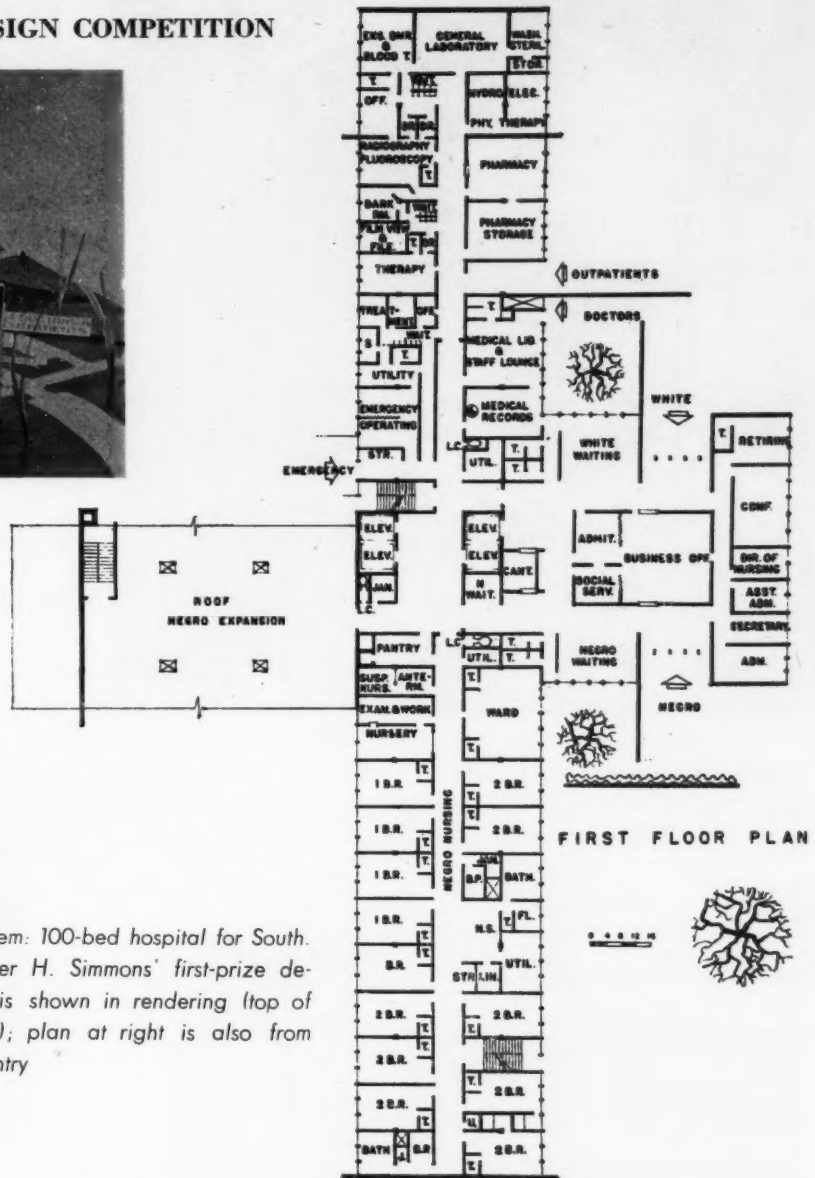
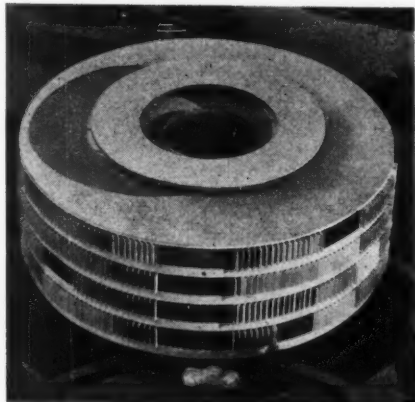


ARCHITECTS from Virginia, West Virginia and the Carolinas held their first joint session with the 22nd annual meeting of the Carolinas-Virginia Hospital Conference April 24-25 in Roanoke, Va., and one of the high spots was announcement of the student winners of the hospital design competition held under the sponsorship of the American Institute of Architects in schools of architecture of the region.

The competition produced some very creditable entries; and in general the prize-winning designs showed evidence of an appreciation of the problems involved in hospital design and reasonable thinking in their solutions.

First prize of \$350 was won by Walter H. Simmons, Clemson College; second prize, \$200, by Don S. Carpenter, University of Virginia; third prize, \$100, William H. Phillips, Virginia Polytechnic Institute. There were seven honorable mentions.

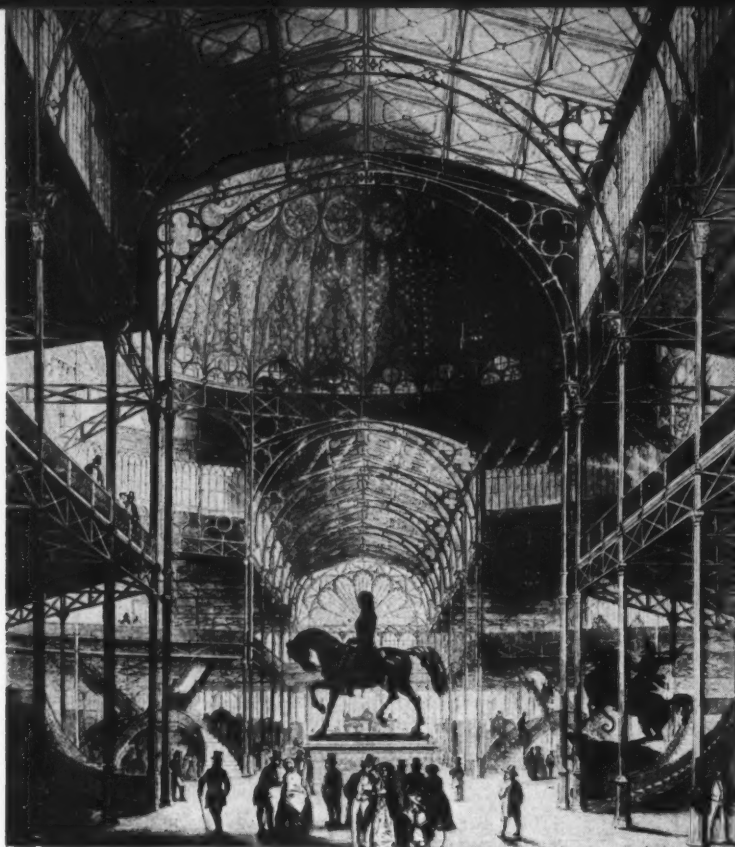
Below: it's a design for a hospital, really radial. It brought an honorable mention to Edward Shirley, North Carolina State College



Problem: 100-bed hospital for South. Walter H. Simmons' first-prize design is shown in rendering (top of page); plan at right is also from his entry



— Drawn for the RECORD by Alan Dunn



B. Silliman

CAST IRON FRAMING AND GLASS

1853—New York's Crystal Palace, erected on present site of Public Library for exhibition of 1853–54. Architects: Carstensen & Gildemeyer



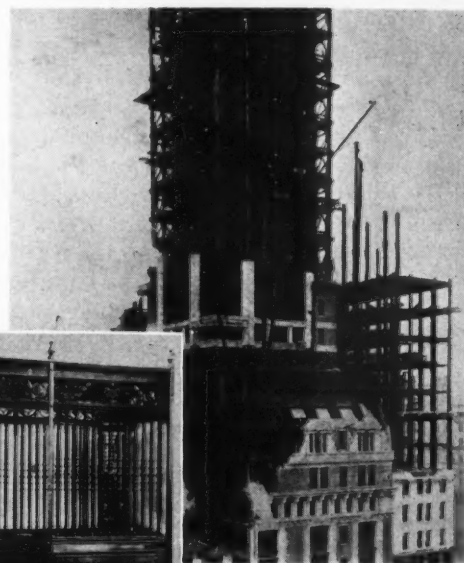
STANDARDIZATION: THE LIFT-SLAB

1919—Forest Hill Gardens, housing built with the "lift-slab" technique developed by the architect, Grosvenor Atterbury



FIRST CONCRETE STRUCTURE IN U. S.

1852—A large barn erected by Horace Greeley in Chappaqua, N. Y., later made into a house



STEEL FRAMING AND THE ELEVATOR

1907—Singer Building, New York City; base of tower, showing wind bracing at corners. Architect: Ernest Flagg. The elevator cab dates to the period 1910–1920

ENGINEERING AND ARCHITECTURE: A.I.A. SCANS 100 YEARS

THE AMERICAN INSTITUTE OF ARCHITECTS has marked its annual convention by assembling an exhibit that spans a significant century of developing collaboration between engineering and architecture.

Dean Leopold Arnaud of the School of Architecture at Columbia University and his committee have approached the staggering task of organizing their subject by establishing six sections, each devoted to a major evolutionary step in building design and construction — cast iron, the steel frame, the elevator, reinforced concrete, glass, and standardiza-

tion. They have limited themselves strictly to these categories, leaving to another occasion such aspects of the subject as wood, aluminum and prestressed concrete and more technical specialties like plumbing, heating and lighting.

The exhibit will be opened to the public June 10 on the street-level mall of Lever House in an installation designed by Morris Ketchum Jr., of Ketchum, Giná & Sharp, New York architects. Some 200 photographs will be mounted on 42 panels, each 40 in. sq, hung on a series of specially designed metal and wood standards. The whole display is

planned to be demountable and packable; and it will be sent to Chicago in the Fall for the Engineering Centennial celebrating the 100th anniversary of the American Society of Civil Engineers.

"The Re-Union of Architecture and Engineering 1852–1952" is the final title; some who see it may wish it had been possible to cover the substance of the original one, "Engineering Contributions to Architecture 1852–1952." Lewis Mumford's text helps to suggest awareness of architecture's "heavy debt to the engineer" as well as its own creative role.

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3/16" 24 BTU/sq. ft./hr./°F	5/16" 2.2 BTU/sq. ft./hr./°F	3/16" 24 BTU/sq. ft./hr./°F
	1/2" 1.4 BTU/sq. ft./hr./°F	

Based on the "K" factors at top of each table, heat transmission rates through the various thicknesses of KENTILE, KENCORK and KENRUBBER are shown. The °F means that this is the transmission rate when there is 1°F difference between the top and bottom of tile. The heat transmission rate

increases proportionately with an increase in the temperature difference between the top and bottom of the tile; e.g., with 1/8" KENTILE, heat transmission rate would be 180 BTU/sq. ft./hr. if there were 5°F difference between top and bottom of tile.

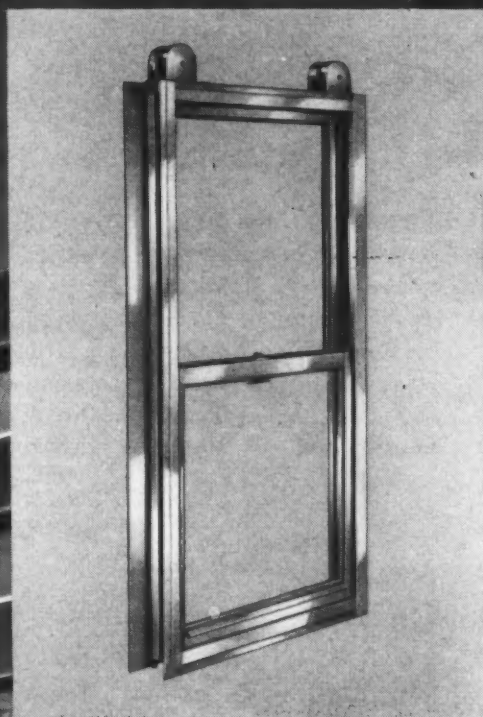
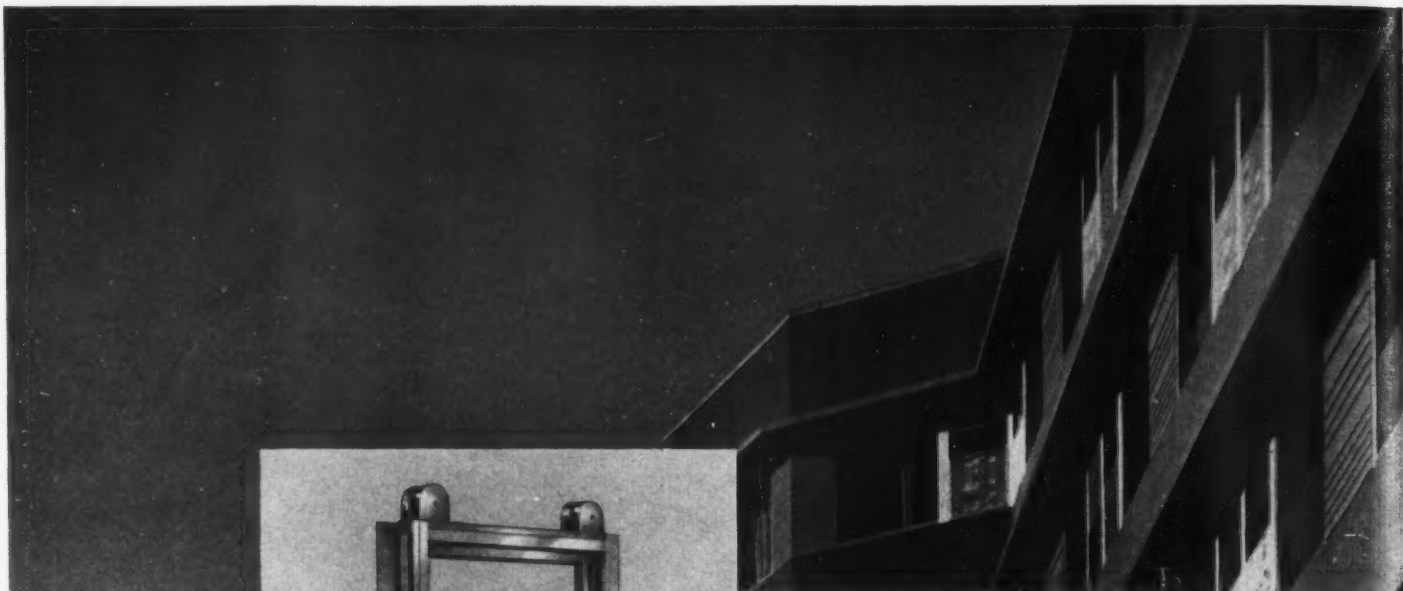
Write to the nearest office listed below for FREE Folder that summarizes research data prepared to answer your questions about the use of resilient tile flooring over radiant heating.

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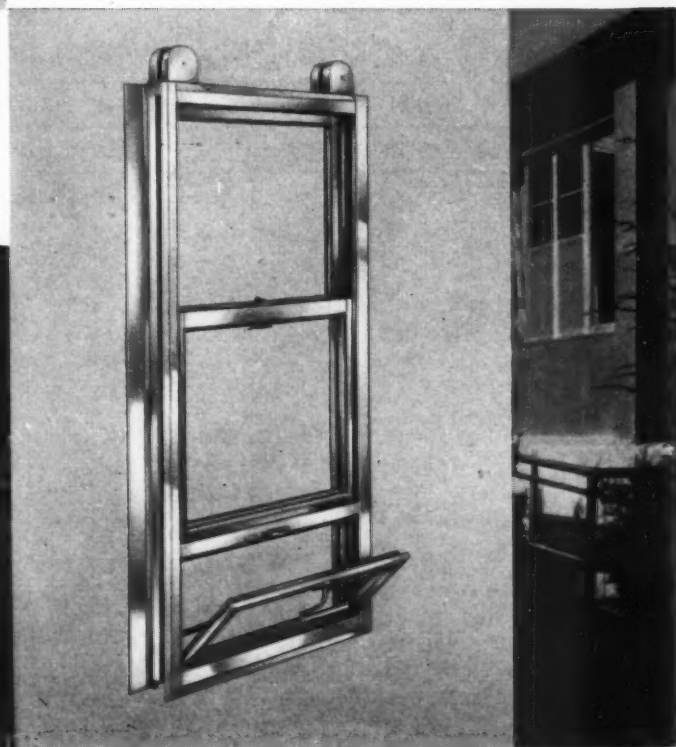


Here is Ceco-Sterling Double-Hung Aluminum Window, Series 200-B used in commercial, monumental, office, and industrial buildings... popular for hospitals and schools.

Here is Ceco-Sterling Double-Hung Aluminum Window, Series 200-B with Hopper Vent... especially adaptable for hospitals and schools. →

Here are 9 reasons you'll prefer Ceco-Sterling Aluminum Windows

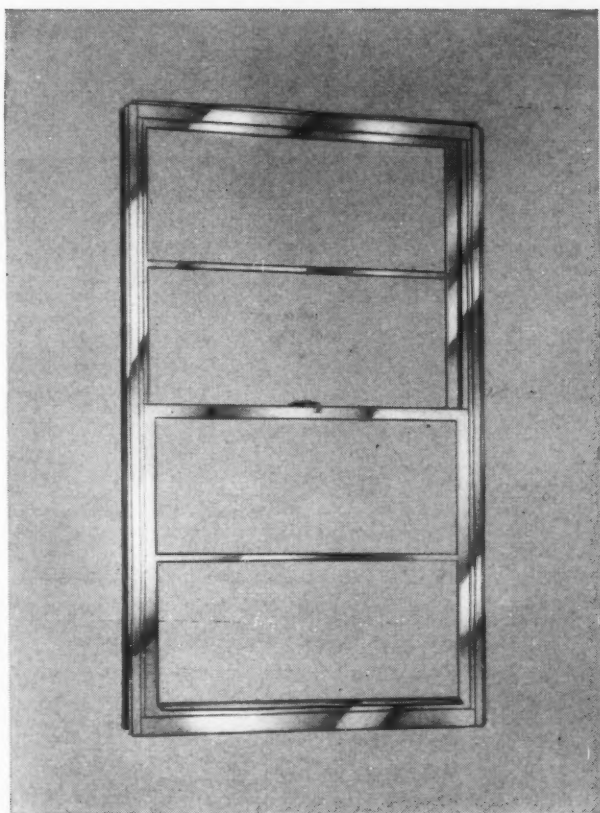
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- 5 Wipe-easy cleaning
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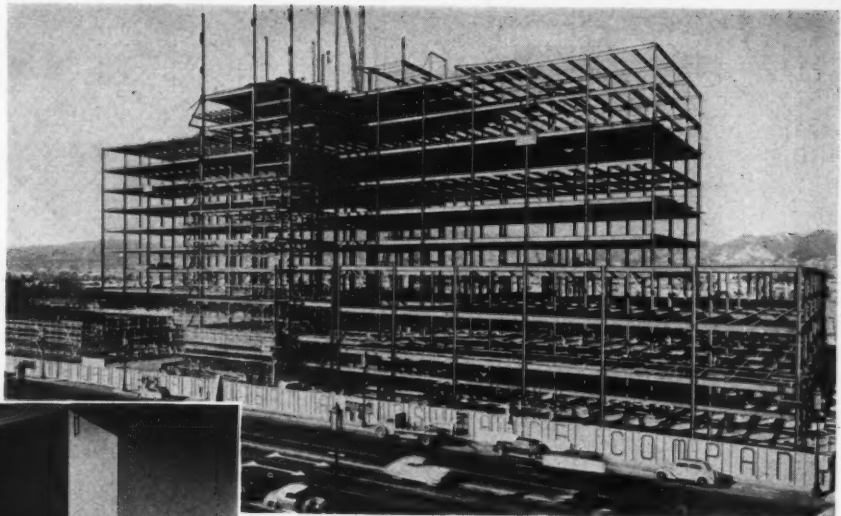
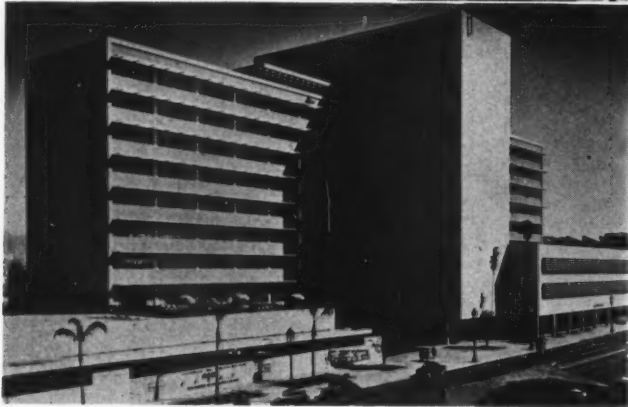
A.I.A. EXHIBIT

(Continued)

LIGHTWEIGHT STEEL FRAMING

1947—Construction photograph shows office building for Prudential Life Insurance Company in Los Angeles; completed building below. Architects: Wurdeman and Becket

Julius Shulman

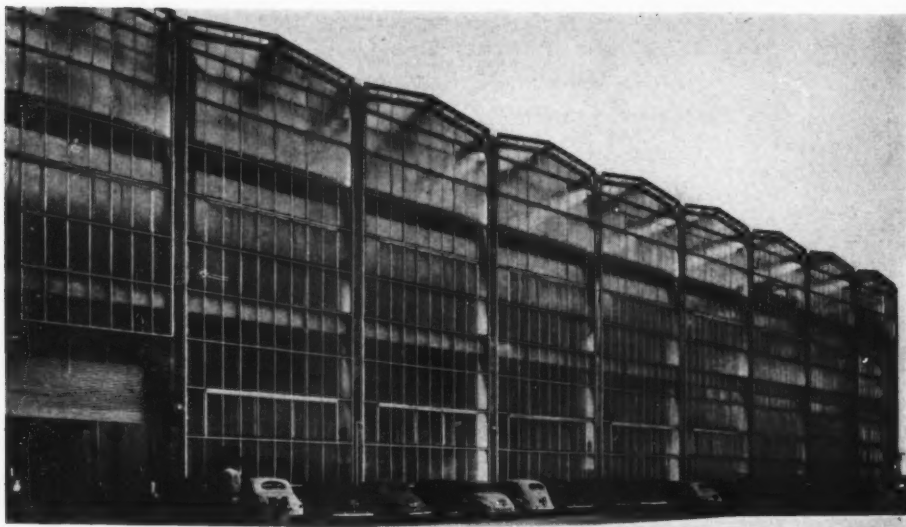


Lanfre-Wright

GLASS WALLS

1947—U. S. Navy Ordnance Building, San Francisco (at left below). Architects: Kump and Falk

Jack Holmes



Roger Sturtevant

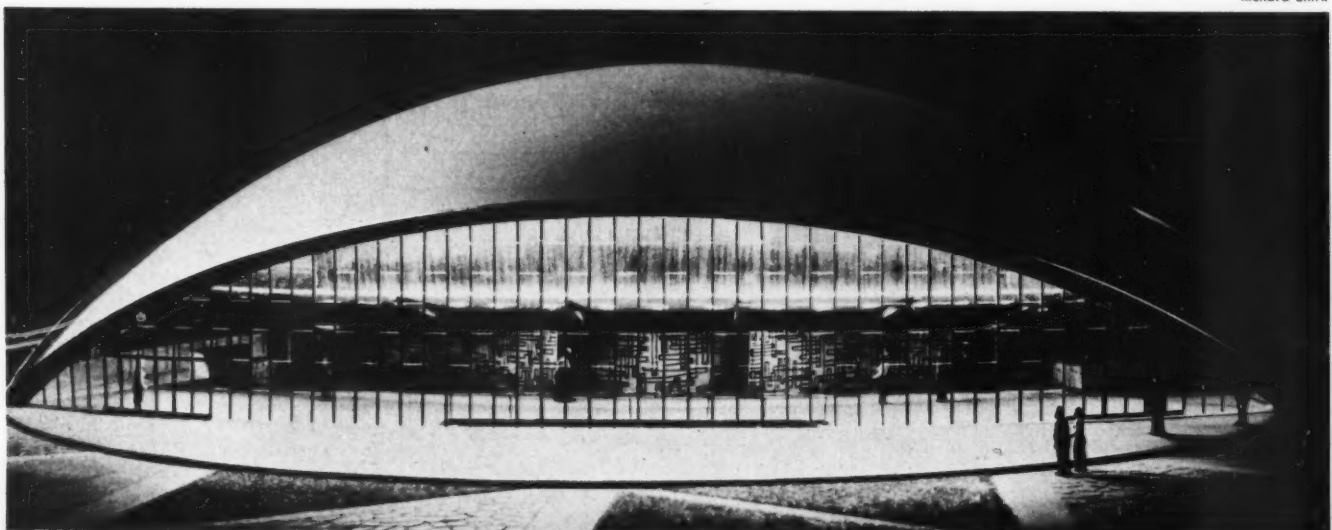
STANDARDIZATION IN PROCESS

1952—Waffle-like roof slabs 50 by 50 ft are made of 609 precast reinforced concrete blocks 2 ft sq, raised to position by hydraulic jacks on top of columns. Eight of these units comprise completed structure in the scheme for some 40 buildings for Atlas Light Industrial and Warehousing Terminal, Miami, by Laurence Farrant & Walter Harry, Assoc., Consulting Engineers

Richard Shirk

REINFORCED CONCRETE DOME, STEEL AND GLASS FAÇADE

195?—Eero Saarinen's preliminary design for a new chapel for the Massachusetts Institute of Technology, a project which is still in the development stage

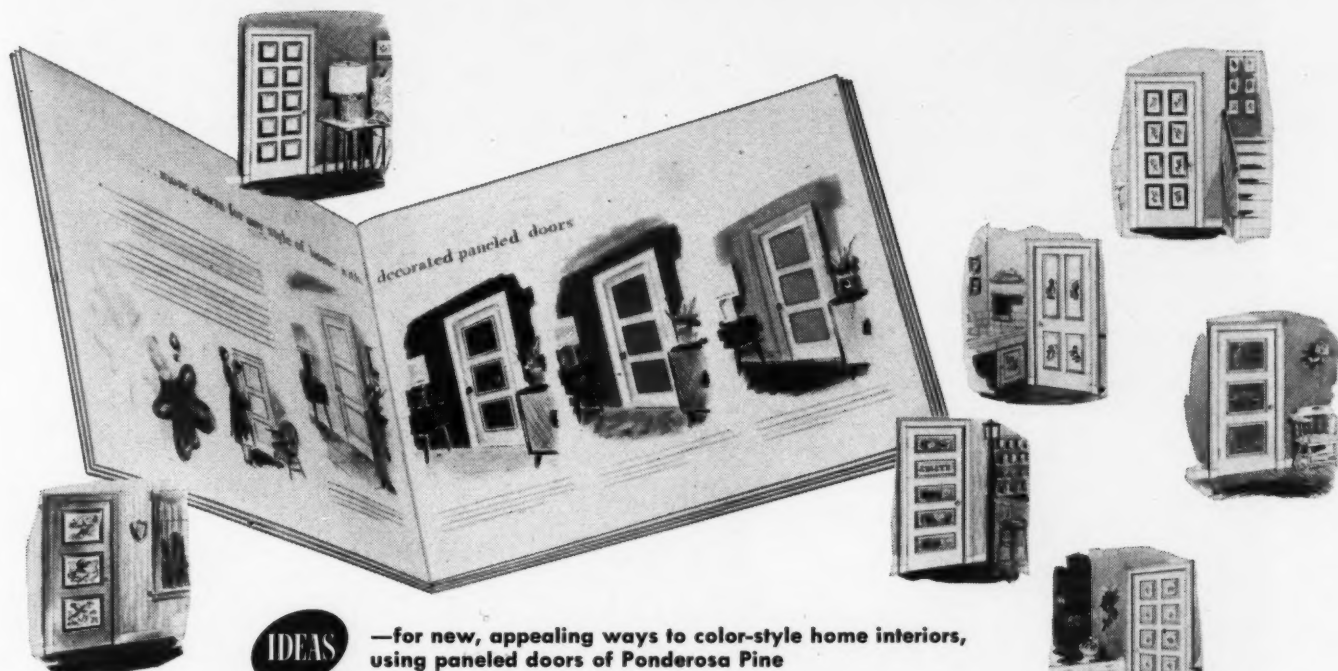


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There's something *new* in color styling today—a way of making homes more attractive, more inviting to prospective owners. You do it with decorated doors of Ponderosa Pine—paneled doors that bring new and exciting interest to modern, ranch type or traditional homes. For leading decorators—home magazine editors—and color stylists have discovered almost unlimited possibilities in these satin-smooth paneled doors for expressing the modern trend toward the use of more color.

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Chicago 3, Illinois

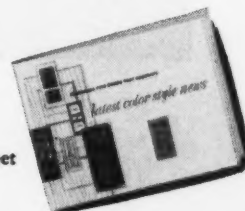
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Please reserve a copy of your new book, "Latest Color Style News" for me—and send it to me without cost or obligation.

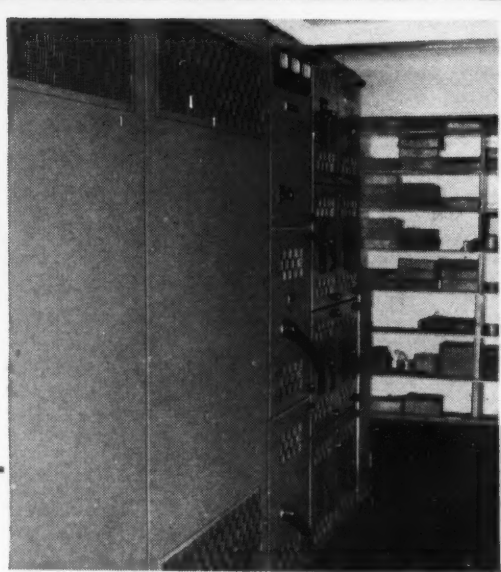
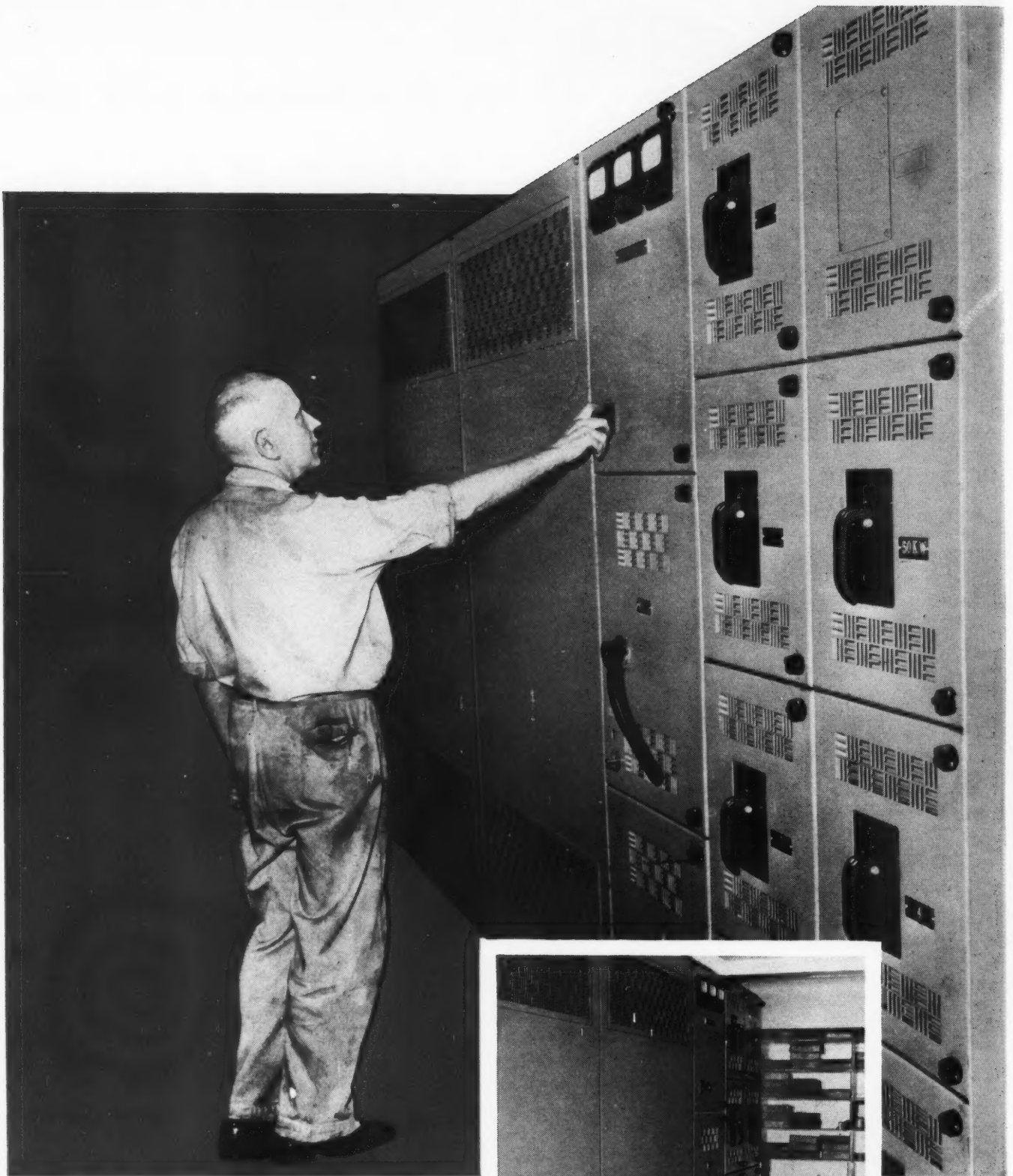
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City.....Zone.....State.....



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Westinghouse Power Centers meet SPACE and WEIGHT LIMITATIONS at Kansas City Star

The control room was small—the floor would not support heavy liquid-filled transformers. Confronted with this situation, the Kansas City Star requested recommendations on a power distribution system. The problem was solved with these Westinghouse Dry-Type Power Centers.

Two units are now in operation—with provisions for a third unit if load requirements dictate. Complete customer satisfaction is evidenced by this statement from the Kansas City Star:

"It was desirable to locate the power center adjacent to our press controls. This meant that special consideration be given the problem of protecting our operators from the incoming 15-kv line and connections. The completely enclosed design of the Westinghouse Power Center solved this safety problem.

"We like these units because of their low-maintenance requirements. There is no storing, testing or reconditioning of liquids—no gaskets or gauges to

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The Kansas City Star realized many other benefits when they installed Westinghouse Power Centers. For example:

FLEXIBILITY . . . New feeders can be added in minimum time—saving on engineering and labor costs.

ECONOMY . . . Costly vaults eliminated—installed as a unit rather than in separate parts—shorter low-voltage cable runs require less copper.

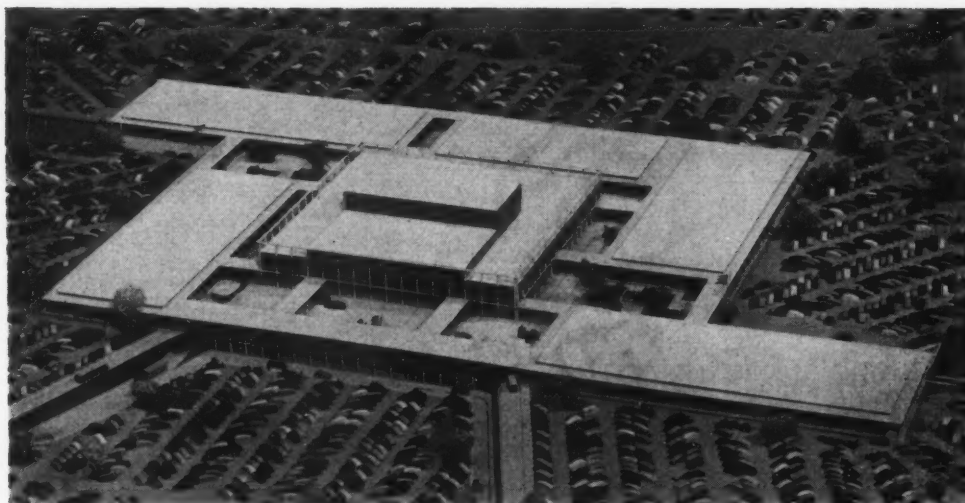
Westinghouse Power Centers will do a better job of meeting your power distribution needs. These two booklets tell how: The details of Westinghouse Power Centers are discussed in Booklet B-4162 . . . various types of plant distribution systems are covered in Booklet B-4045. Ask your Westinghouse Representative for your free copies, or write direct to Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania.

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POWER CENTERS





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Three-story building in center of photo is Hudson branch store, which is planned to provide 480,000 sq ft of floor space. Tenant stores will have another 500,000 sq ft. Storage facilities will be in basement areas keyed to a system of freight-truck passages, loading platforms and service areas, all underground. Parking area is planned so motorist needs only to keep turning to the right to get in, to park and to leave

HUGE REGIONAL SHOPPING CENTER STARTED NEAR DETROIT

ANOTHER MAMMOTH regional shopping center got under way last month — the J. L. Hudson Company's Northland Center in suburban Detroit.

Northland will have Hudson's branch store as the central unit of nearly 1,000,000 sq ft of floor area with some 70 tenant stores completely surrounded by a 6000-car parking area capable of expansion to provide 5000 additional car spaces. Victor Gruen is the architect.

The Center, which occupies 161 acres of a 409-acre site just north of metropolitan Detroit, is designed as "a com-

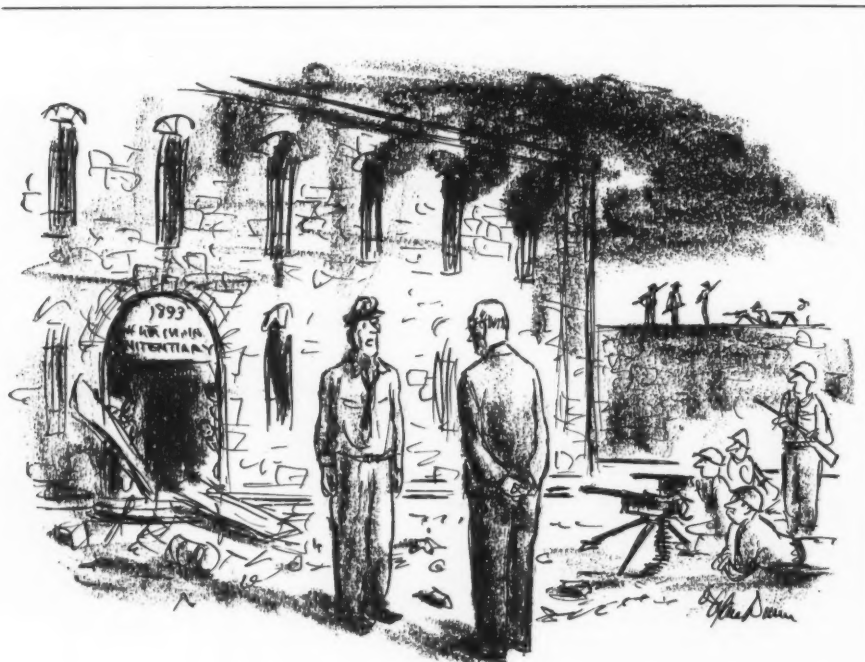
plete one-stop center where a customer can fill every shopping need." It will have one-story stores, shops, markets, restaurants, etc., grouped around garden courts and malls. Tenants will include men's, women's and children's apparel stores, a supermarket, drug and variety stores, hardware and furniture stores, a bank, service shops such as cleaners, shoe repair, barber shop.

Facilities for use by community groups have been given a definite place in plans for the Center. An auditorium with entrance both from inside the Hud-

son branch store and from outside for after-hours use is described as the major community service unit, but it is planned to provide other facilities, as available, for use in community activities.

Extensive surveys of population, income levels, traffic flow and the merchandising pattern in the Detroit area preceded selection of the site, which is said to have a potential trading area of 450,000 residents with family incomes averaging \$7100 in the city section and \$6000 in the suburban section.

Construction is reinforced concrete.



— Drawn for the RECORD by Alan Dunn

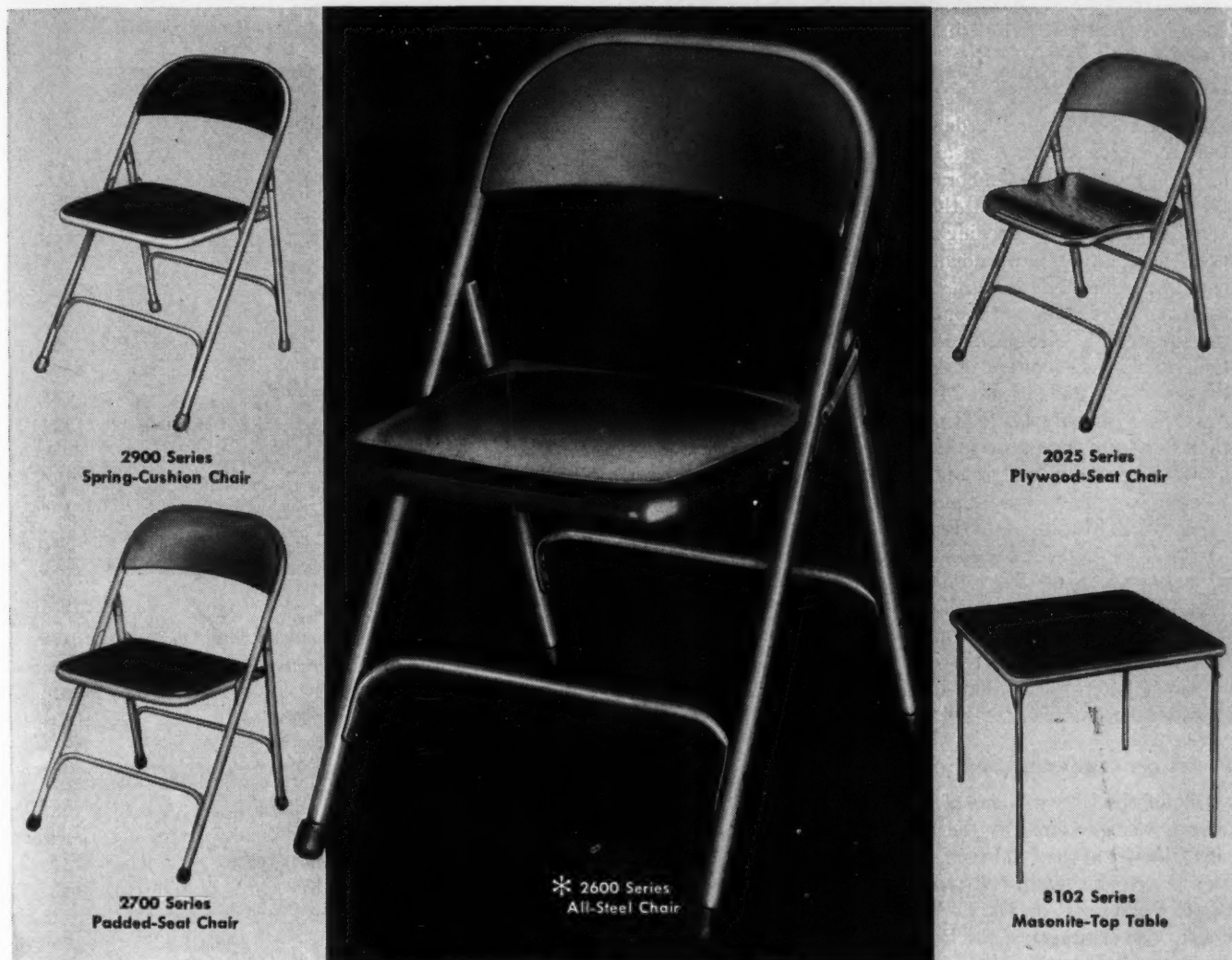
"They want a decontrolled environment, panic locks, better fenestration, indoor-outdoor synthesis . . ."

Shade trees and rest benches will be used to give the court and mall areas a park-like atmosphere. Conveniences like drinking fountains, lockers, mail boxes, directional and orientation maps and restrooms will be provided in all the malls

Photograph House



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ARCHITECTURE AND ARTS: "ALLIES" DEBATE SCHISM

Middle Atlantic Regional Conference Is Held by A.I.A. at Philadelphia

ARCHITECTS were on the defensive as the hapless perpetrators of an undeniable schism — the contemporary hiatus between architecture and the "allied arts" — at the lively opening session of the Middle Atlantic Regional Conference of the American Institute of Architects at Philadelphia last month.

Lawrence M. C. Smith, president of the American Federation of Art and a trustee of the Philadelphia Museum of Art, had to modify his bald statement that architects *never* provide for accommodating painting and sculpture; but the familiar plaint was echoed in the statement of Mural Painter Ben Shahn, who said he had yet to see a building where murals are an integral part of the design, rather than mere appliqué.

The cost aspect of the architect's problem was advanced by the architects as one factor in their failure to close a gap they did not deny.

Producers Sponsor Session

One of the later sessions of the conference was sponsored by the Philadelphia Chapter of the Producers' Council. The principal speech, "Research and Better Buildings," by Dr. C. W. Rassweiler, vice chairman of the Board and director of research for the Johns-Manville Corp., focused attention on architecture as a technology in provocative contrast to the opening symposium's approach to architecture as an art.

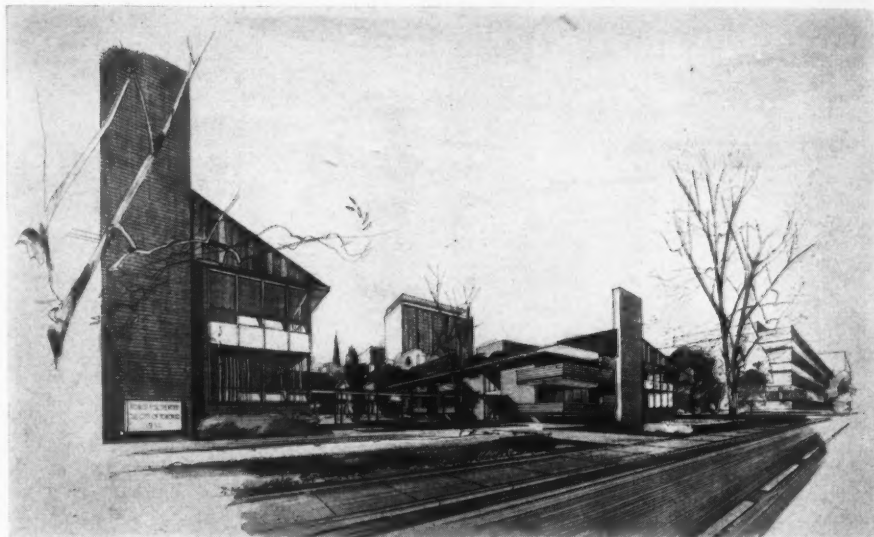
The Producers' Benjamin Franklin Medal, for "the best use of quality building materials to promote new ideas and their application and stimulate imaginative and progressive discussion," was awarded to Sweet & Schwartz, Architects, for Flamingo Apartments, Philadelphia.

One Award on Exhibit

The Pennsylvania Society of Architects Award was given to Vincent Kling "for outstanding work" and particularly for Kimberton Farms School Arts and Crafts Building and School Residence. It was the only award made in connection with the Philadelphia Chapter's convention exhibit at John Wanamaker's Store.

Alfred Bendiner received the Venzie Corporation's award for outstanding work in painting and sculpture by a Philadelphia A.I.A. member.

NEWS FROM CANADA by John Caulfield Smith



Warner Brothers

Proposed homes for the aged in Toronto are planned to avoid "institutional atmosphere." Each building is to house 40 walking patients. Construction is scheduled to start sometime this year. Architects, Page & Steele, Toronto

Toronto Moves to Solve Its Problem of Homes for Aged

THE CITY OF TORONTO has begun taking positive steps to ease the pressing problem of providing homes for its aged with the announcement that construction is expected to start later this year on the first units in a new municipal program.

A prime objective will be to avoid as much as possible in the buildings the "institutional atmosphere" usually identified with them.

Currently favored by the committee in charge of considerations for the program are buildings which would house 40 walking patients each; but larger structures of 360 beds each are also being investigated. It is expected that the final solution will lie in a combination of these two types.

Eight different sites in both central and outlying sectors of the city are currently being examined. If possible, the committee would like to place the buildings in series of three or four, near park land.

It is estimated that 30 of the smaller type buildings would cost about \$5,400,000 exclusive of land.

Construction Down 21%: Rally Still Forecast

A DISAPPOINTING TOTAL of construction contract awards was chalked up for the

first quarter of 1952. The figure of \$362.3 million is 21 per cent below the \$457.2 million registered for the same period last year. Industrial contracts, which have been leading the field, are down 48 per cent, more than any other category.

Even so, expectations of a construction fall-off for the entire year might be premature. As the building season gets underway, greater activity will undoubtedly begin to be felt.

Nine Per Cent Rise Expected

Department of Trade & Commerce statisticians, who have a reputation for near-infallibility, expect that spending on new construction and equipment will be nine per cent ahead of the 1951 level. There are still nine months left in which to make up current losses and justify this prediction. Still, it may be a tight squeeze.

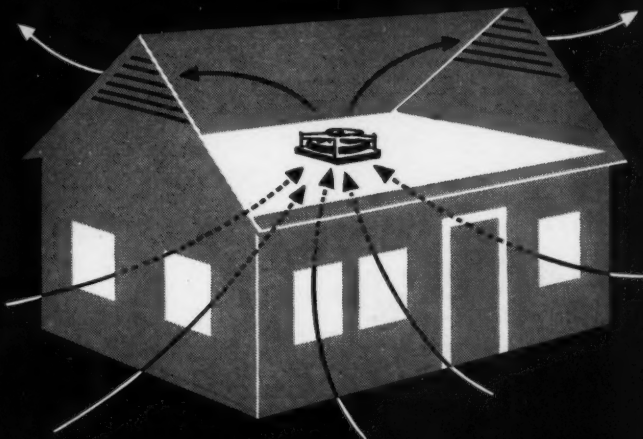
March Second Highest Yet

March awards, according to MacLean Building Reports, Ltd., reached the second highest figure ever recorded for the month, with a total of \$102.3 million. But even this was 42 per cent under the March 1951 amount. Some consolation lies in the realization, how-

(Continued on page 32)

How to give clients cool comfort at low cost

■ On hot summer days the temperature inside a house gets hotter and hotter as the sun bakes down on walls and roof. At night the outside temperature falls—but hot steaming air fills the attic and rooms. A Hunter Attic Fan pulls cool air into the house, circulates gentle breezes, drives pent-up heat from rooms and attic. The house gets cool, stays cool through hot summer nights.



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Performance Guaranteed

Quiet, trouble-free operation is assured by Hunter's 65-year experience in manufacturing fans. Hunter Attic Fans are available in capacities to fit any home and any climate. Fan assembly guaranteed 5 years; motor and shutter, 1 year.

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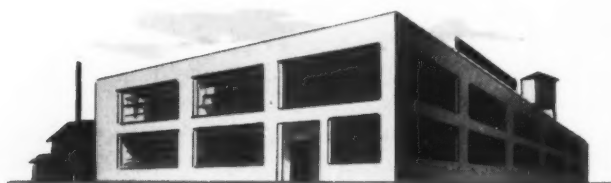
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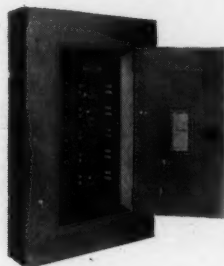
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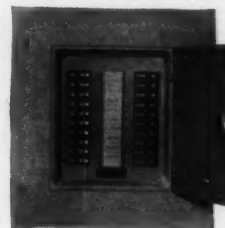
The Next Time a job involves power and light distribution and control — whether it's a small load center or service equipment, or a large switchboard, panelboard, busduct or other unit — use . You'll find it pays handsome service dividends.



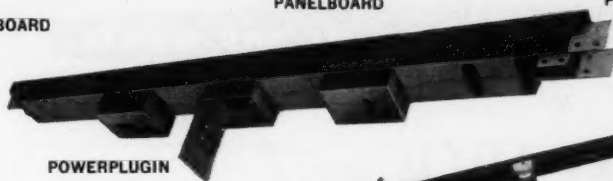
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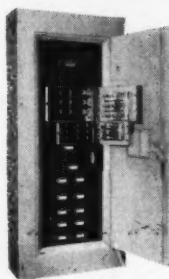
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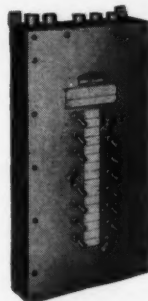
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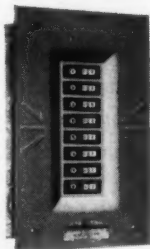
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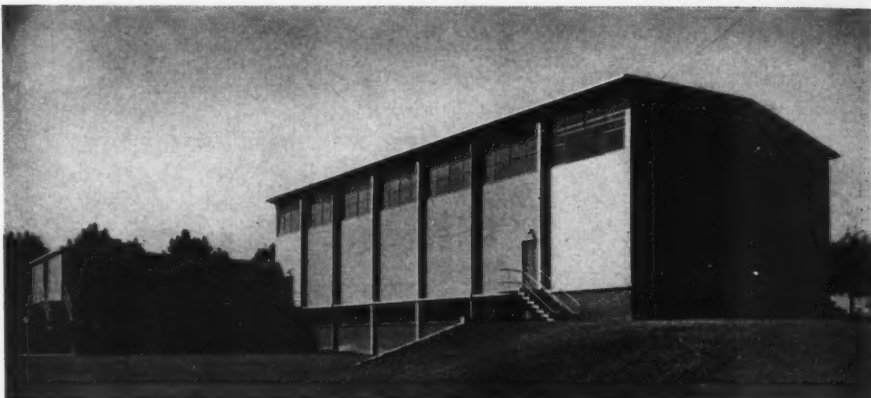


THE RECORD REPORTS

CANADA

(Continued from page 28)

Kitsilano War Memorial Community Center, Vancouver, B. C., includes gymnasium, meeting rooms, hobby shops, and a combined banquet hall and lounge. Architects: Semmens & Simpson, Vancouver



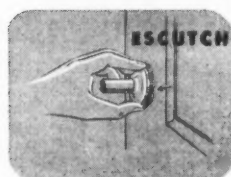
Graham Warrington

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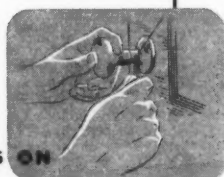
GET THEM IN

NATIONAL LOCKset

Patent Applied



ESCUTCHEON SNAPS ON



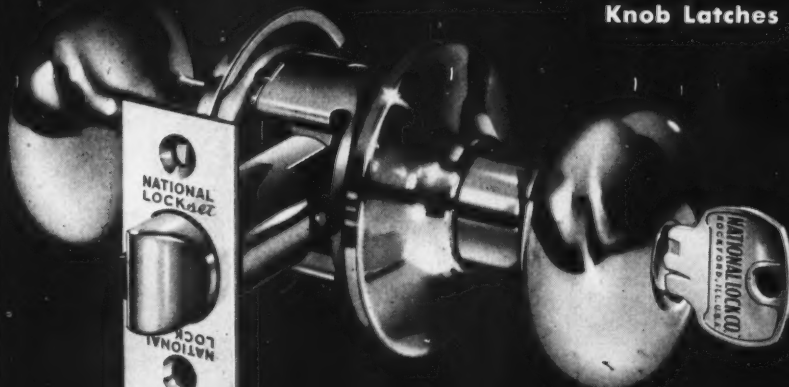
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After NATIONAL LOCKset is firmly affixed to the door (steps which are simple and fast to perform), the escutcheon is snapped on...engaging two small embossings in the clamp plate. • Application of knob is just as easy. You merely press in small

spring pin in side of tube and push knob on tube until pin engages opening in neck of knob. • Ask the man who has actually worked with NATIONAL LOCKset on the job. He will tell you there's nothing like it for a fast, easy, workmanlike installation.

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Pushbutton Locks . . . Privacy Locks
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NATIONAL LOCK COMPANY

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ever, that the March 1951 total — \$100 million ahead of March 1950 — was unusually high even for a boom year.

Engineering Registers Gain

Engineering was the only type of construction that showed a gain over the first quarter of 1952. Biggest factor in the rise was the start made on the Edmonton-Burnaby pipe line.

While industrial and commercial building both lagged badly, residential construction managed almost to hold its own and needs only slight gains in the coming months to match last year's level.

The sag in March levels was felt not only in all categories but also in all regions. Loss in Ontario amounted to more than \$65 million. Greatest loss in other regions was Quebec's \$3.5 million.

Industrial Plants Still Lead

Feature of the big job list for the month was the number of industrial plants included.

The list was headed by a \$10 million truck plant in Oshawa, followed by a \$4 million pulp plant expansion in Newfoundland, a cable plant expansion in Montreal, a foundry in Hamilton, Ont., a chemical plant in Varennes, Que., an engine plant in Montreal, and a ferro-silicon plant at Beauharnois.

Other jobs on the list were two warehouses and two apartment projects in Montreal, a hospital in the Lake St. John district, and housing developments at Kitimat, B.C., and Ville LaSalle, Que. The rest were defense projects at Downsview, Winnipeg, Trenton and Cold Lake.

On the chart, the total picture of construction contracts awarded in the quarter looks like this:

(Continued on page 34)



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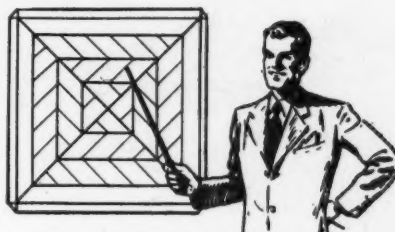
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Give you these
Two Important Features

PATENTED BUILT-IN DIFFUSING VANES

1

Agitair diffusing vanes really mix the air, insuring rapid diffusion and temperature equalization. This permits the use of higher temperature differentials. It also makes possible the introduction of larger "cfm" quantities which can be limited to shorter "blows."



2

TAILOR-MADE FOR 1, 2, 3, AND 4 WAY BLOWS

Agitair square and rectangular diffusers come in a variety of patterns to provide blows in one-two-three- and four directions. Thus 100% air distribution is assured in any shape area, from any location without blank-off's or oversized outlets.

Write for Complete Data



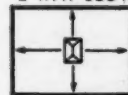
1 WAY BLOW



2 WAY BLOW



3 WAY BLOW



4 WAY BLOW

AIR DEVICES Inc. 17 EAST 42nd ST. • NEW YORK 17, N. Y.

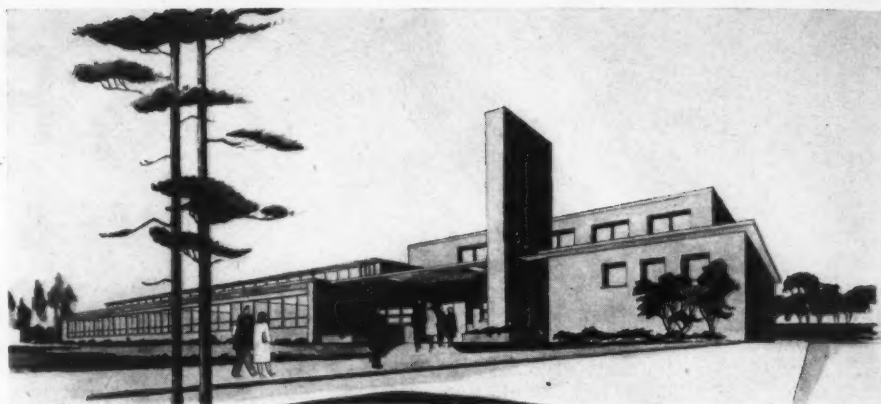
AIR DIFFUSERS • AIR FILTERS • ROOF EXHAUSTERS

THE RECORD REPORTS

CANADA

(Continued from page 32)

High School in Markdale, Ont., is typical of the contemporary school work being done by architects Shore & Moffat of Toronto



RESOLITE paints with colored light. Six beautiful standard colors, a variety of form patterns and surface finishes, make Resolite easily adapted to any architectural or decorative motif in home, office or shop.

... the Translucent Structural Panel with endless possibilities in architectural treatment from the simple interior partition to exterior use in patio covering and colorful building facings.

Structurally rugged, **RESOLITE** is also shatterproof, avoiding the hazards of breakage and splintering in decorative or utility partitioning.

RESOLITE is unequalled for skylighting — either industrial or commercial — because it materially reduces heat rays with little loss in light values. It diffuses light in all directions, avoiding the harsh contrast of sunshafts. Economical, too, because of its installation ease and unlimited life.

Resolite is made of polyester resins, reinforced with Fiberglass mat. It is unaffected by weather extremes of heat, cold and moisture. It can be worked with ordinary tools and skill.

Write for free literature, with complete information about **RESOLITE**.

RESOLITE Corporation
ZELIENOPLE, PA.

(MILLIONS of DOLLARS)

	1952	% chge fr 1951
Residential	68.9	- 5
Commercial & Institutional	79.4	-40
Industrial	74.6	-48
Engineering	140.4	-29
Total	362.3	-21

Visiting R.I.B.A. Officers Feted by Toronto Architects

AMONG recent visitors of note to Toronto were A. Graham Henderson, president of the Royal Institute of British Architects and C.D. Spragg, secretary of the Institute. On their way to attend the annual assembly of the Royal Architectural Institute of Canada in Vancouver, the two were entertained on their stopover at a reception arranged by members of the Ontario Association of Architects.

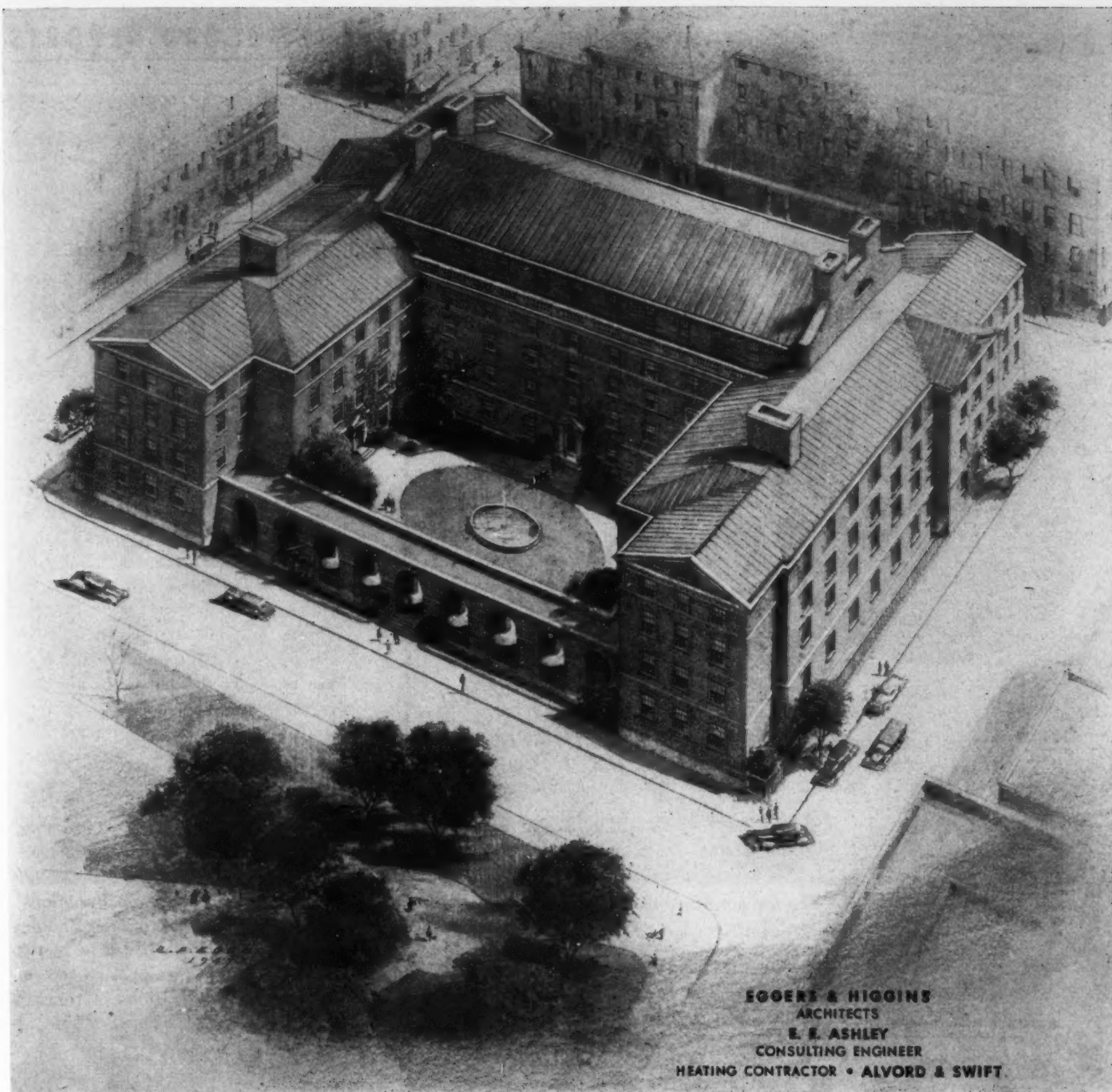
In an interview, Mr. Henderson declared that the foremost fear of British architects was that unemployment might result from current government regulation of the construction industry. Only projects sponsored by the government can go ahead, he said, and relaxation of control "depends entirely on the international situation, since the defense program is closely tied in with our building progress."

House Builders Group Chooses Chief for 1952

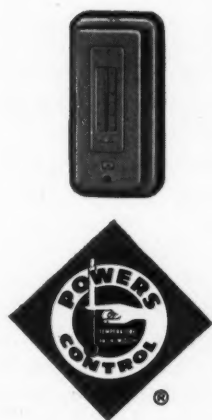
At its recent convention in Winnipeg, the National House Builders Association elected W. H. Grisenthwaite of Hamilton, Ont., as its new president.

The new N.H.B.A. president, who is head of Grisenthwaite Construction Co., Ltd. plans an expanded program of

(Continued on page 36)



NEW YORK UNIVERSITY, LAW COLLEGE, WASHINGTON SQUARE, N. Y.



POWERS

Temperature and Humidity Control was selected for this distinguished building, outstanding for the excellence of its traditional design.

Here, 199 convectors are controlled by 54 Powers room thermostats. There are 30 complete air conditioning systems for summer cooling and dehumidifying, also winter ventilation and humidification—all are controlled by Powers equipment.

When you wish automatic temperature control which often gives 25 to 40 years of dependable service with a minimum of repairs, specify Powers. Over 60 years experience gained in supplying temperature control for many important buildings may be helpful to you in selecting the type best suited for your requirements. Contact our nearest office, there's no obligation.

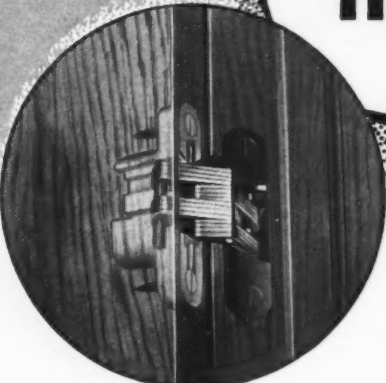
(a85)

Established in 1891 • **THE POWERS REGULATOR COMPANY** • SKOKIE, ILL. • Offices in Over 50 Cities

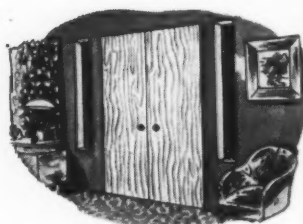
SOSS
INVISIBLE
HINGES

**"HIDE
the
HARDWARE"**

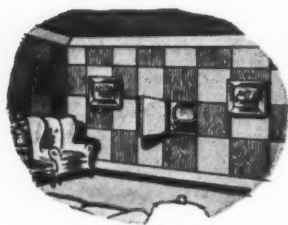
says
**FRANK
LLOYD
WRIGHT**



"My efforts since I've been practicing for myself, is to get rid of it. The less hardware that is in evidence, the better. The more you get the hardware out of sight, and make less of it, the more you are going to be modern and in line with modern architecture."



IDEAL FOR FLUSH DOORS



PERFECT FOR WALL PANELS

① The Soss Invisible Hinge was designed to stay out of sight. It is the only all NEW hinge since Noah built his ark.

"The less hardware that is in evidence the better."

② The Soss Invisible Hinge is also known as "the hinge that hides itself."

"Hardware is still too ornamental—it isn't sufficiently simple."

③ What could be less ornamental or more simple than something you can't see—like the Soss Invisible Hinge?

"Hardware should be something that really works and should be out of sight—"

④ Soss Hinges "really work" smoothly and quietly on hardened steel roller bearings.

★ All quotes taken from Mr. Wright's address before the Pacific Coast members of the American Society of Architectural Hardware Consultants and the National Contract Hardware Association at the Arizona Biltmore in Phoenix, Arizona.

Write for **FREE CATALOG** that gives complete details, blueprint templates, and the many uses of this modern hinge to . . .

SOSS

MANUFACTURING CO.

21769 HOOVER ROAD, DETROIT 13, MICH.



A.I.A. File No. 27-B-1

THE RECORD REPORTS

CANADA

(Continued from page 34)

activities for Canada's home builders and looks forward to the introduction of an official service policy for their customers.

Revised Code May Raise Present Wiring Standards

Revisions in the National Building Code will probably bring recommendations for wiring standards to higher levels than anything conceived in the past. Authority for the prediction is David S. Catton, chairman of the panel on electrical services now working on the code.

Present references to adequate wiring state only that the Canadian Electrical Code is to be followed. In the new version, it is proposed that a qualifying clause be added, stating, in effect, that wiring indicated by the Canadian Electrical Code might not necessarily be adequate for the building concerned.

A question is immediately raised, of course, as to what constitutes adequacy. Catton suggests that the answer be given under the "Uses and Functions" section of the revised National Building Code. This section itself will be new to the Code, and will emphasize the importance of considerations of function in building design and specification.

Picture Brightens for 1952 Building Supplies

Further expansion in output of building materials is indicated for 1952, according to a recent survey, with greatest increases expected in such lines as sanitary ware, hot water storage tanks, cement and cement products, and gypsum products.

Actually, there were not too many construction shortages last year either, according to the survey which was recently tabled in the House of Commons by Rt. Hon. C. D. Howe, Minister of Defense Production. The survey, which covered production of building materials, both past and anticipated, demonstrated that average construction time for houses in 1951 was 7.0 months, as compared with an average of 7.1 months in 1950.

—the lid is off the ***most important news in lighting today!***



Announcing the Ultimate in Creative Recessed Lighting

MITCHELL **uni-flow** fluorescent troffers

**when you plan for the best
in recessed lighting,
specify uni-flow**

Here is a picture preview of the MITCHELL UNI-FLOW Fluorescent Troffer . . . completely new . . . dramatically different and superior . . . years ahead of anything in the recessed lighting field. What you are looking at is the result of two full years of development work that has paid off in a product so advanced and improved that the architects, contractors, utility men and wholesalers who have had an opportunity to examine it, say unanimously: "*This is it!*"

If you are now planning a recessed lighting installation, you owe it to your customers, your clients and yourself to learn the full facts about MITCHELL UNI-FLOW. Write, phone or wire today for the most important news in recessed fluorescent lighting.

MITCHELL MANUFACTURING COMPANY, 2525 N. CLYBOURN AVE., CHICAGO 14, ILL.

In Canada: Mitchell Mfg. Co., Ltd., 19 Waterman Ave., Toronto



Send for it! Address Dept. 4-F

End of TV Ban Opens Up Field of Station Design

LIFTING OF THE BAN ON construction of television stations broadened widely the relatively new field of TV station design for architects.

There were 108 such broadcasting outlets in operation when the Federal Communications Commission swept away the restriction, which had stood

for more than three years. Now it is estimated some 3000 new TV transmitters will be erected.

For architects, this decision on the part of FCC offers new opportunities; for many architects it means considerable study of the specialties of television station design. A spokesman for the National Education Association said that up to now only a handful of architects has had any drawing-board experi-

ence in the TV field. Meanwhile, the National Association of Radio and TV Broadcasters is conducting a new study which covers the design and construction of stations.

Pending the publication of this more complete treatment of the needs of broadcasters in their physical plants, the N.A.R.T.B. had a few basic suggestions for architects.

Space is first and foremost in the station operator's mind. One association spokesman advised that the architect preparing plans for station and studio should decide on what he considers to be adequate space, then *double* the amount he has arrived at before drawing his final plans.

Space Needs Stressed

One of the biggest headaches for operators of existing TV stations is the lack of adequate space, principally areas for storing large items (used in TV advertising) such as refrigerators, stoves and household equipment. These furnishings sometimes remain at the studios for weeks after they are shown in displays, it was said.

A further requirement stressed by N.A.R.T.B.: provide ample parking space for both employees and visitors. It is recommended that stations be located outside but near cities; and one of the reasons for this is to assure ample parking area.

The broadcasters say that most TV stations consist of two buildings; one for the transmitting equipment, the other for actual broadcasting. The latter, the studio, is the more expensive of the two. It requires extensive sound-proofing treatment and intricate wiring systems. The estimated cost of the average station, including all its required equipment, was placed at \$385,000.

FCC Allows 2053 Stations

The FCC already has provided for 2053 new stations in 1291 communities throughout the country. These now are assured of clearance and can proceed in their construction phases if and when their material requirements are assured.

It is expected a large volume of new stations will be constructed under the self-authorization procedures of the Controlled Materials Plan. TV and radio stations have been classified as

(Continued on page 312)



Sturdy Oak

the **STEEL** of woods...

in all its natural beauty



For your laboratory—famous Kewaunee custom quality furniture in beautiful, long-lasting, natural finish oak. Oak—the *steel* of woods—for rugged service, long life. Oak—in natural finish—to brighten your laboratory, speed your work.



Specify oak—readily available—for durability and attractiveness. Specify Kewaunee—for finest custom quality, at extremely modest cost. Write today for a free copy of our catalog of Scientific Laboratory Equipment.

Representatives and sales offices in principal cities

Kewaunee Mfg. Co.

J. A. Campbell, President
5046 S. Center Street • Adrian, Michigan
Manufacturers of Wood and Metal Laboratory Equipment

Bostwick

DIAMOND MESH METAL LATH

MORE MESHES PER SHEET



How can the Architect get what he wants?

● Certain trends in school design are developing which the architect wants . . . yet, he seldom gets built his perfect solution of a community's needs. He often has to take into account the notions of laymen who are empowering him to proceed . . . whose desires are sometimes too solidly based upon twenty-year-old facts.

With Bostwick metal lath, steel studs and casings you have flexibility of design. With metal lath you can meet educational and structural developments that would be impossible with other types of construction. You provide reinforcement, long life, cleanliness, and low maintenance in the finished walls. For over a half-century Bostwick lath has been used in our nation's great schools, colleges and universities, not only because of structural advantages but also because metal lath requires fewer dimensional limitations.

Bostwick will gladly help you with specifications on metal lath, casing and accessories.



the

Bostwick

steel lath company

105 Heaton Ave. Niles, Ohio



"Sign up now, boss—it's got Honeywell Controls!"

The *best* way to assure comfort in any building is to insist on Honeywell controls

If *you* have a control problem, Honeywell can help provide the proper thermal environment for any client—anywhere—in any kind of structure.

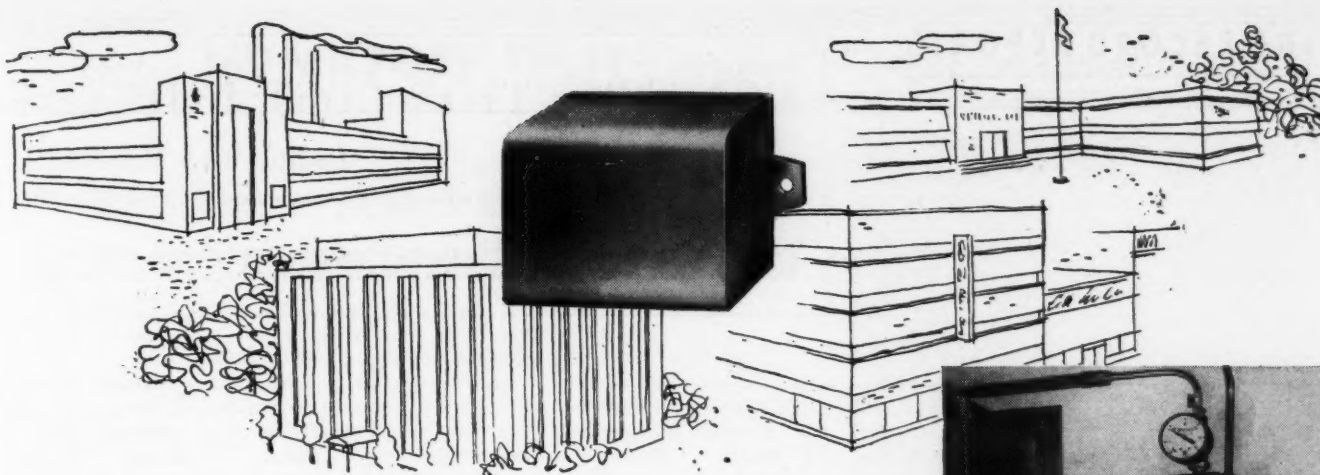
A large staff of well-informed control engineers—in 91 different Honeywell offices across the nation—are experienced in doing just that. Or—there's a lot of literature that's yours for the asking—on the auto-

matic control of heating, ventilating and air conditioning.

So, why not *talk to Honeywell*? Why not *write to Honeywell* about *your* control problem? And why not do it *now*?



For help with any control problem talk to Honeywell



for pin-point control of heating, ventilating and air conditioning

Specify Honeywell Automatic-Reset Pneumatic Relay

Stop temperature see-sawing and lagging

This magically accurate relay, made only by Honeywell, sets new standards of performance for pneumatic temperature controls. By using it, you can give clients closer temperature control, regardless of weather variations.

This remarkable Honeywell mechanism virtually *eliminates see-sawing temperatures* because it goes to work the instant the temperature deviates from the thermostat setting.

The Reset-Relay can be installed on any graduate-acting pneumatic system where close temperature control is desirable.

Get the complete story on this exclusive Honeywell control. Call your local Honeywell office or mail coupon below.

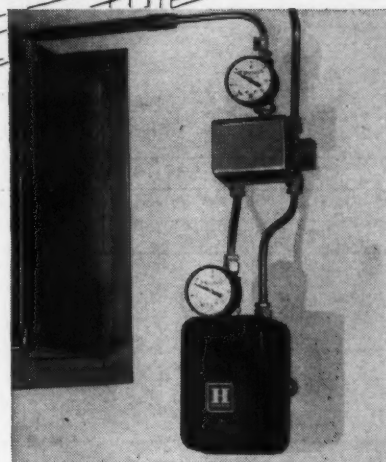
MINNEAPOLIS
Honeywell



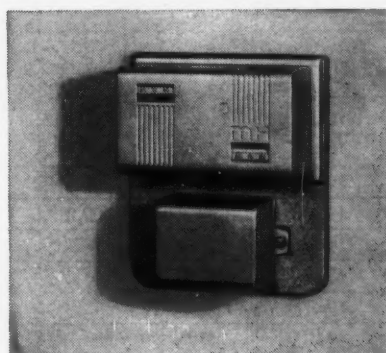
First in Controls

"and when I heard (your firm name) designed that building, I decided to move in."

FREE! Personalized cartoon. For your 8½" x 9" reproduction of this Hoff cartoon (incorporating your name or the name of your firm), fill out and mail coupon today.



This typical installation shows the Honeywell Reset-Relay used with a Honeywell insertion thermostat to control temperature of discharge air.



Here the Reset-Relay adds reset action to a Honeywell Grad-U-Stat, which controls other pneumatic devices such as a damper motor.

MINNEAPOLIS-HONEYWELL REGULATOR CO.
Dept. AR-6-131, Minneapolis 8, Minnesota
Gentlemen:

- ☐ Please send me information on your Gradutrol System of pneumatic controls.
☐ Please send me a free, personalized reproduction of the Hoff cartoon, inscribed with this name:

Name _____
Firm Name _____
Address _____
City _____ Zone _____ State _____

THE RECORD REPORTS

CONSTRUCTION COST INDEXES

Labor and Materials

United States average 1926-1929=100

Presented by Clyde Shute, manager, Statistical and Research Division,
F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

NEW YORK

Period	Residential		Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr.		Residential	Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr.	
	Brick	Frame		Brick and Concr.	Brick and Steel			Brick and Concr.	Brick and Steel
1925	121.5	122.8	111.4	113.3	110.3	86.4	85.0	88.6	92.5
1930	127.0	126.7	124.1	128.0	123.6	82.1	80.9	84.5	86.1
1935	93.8	91.3	104.7	108.5	105.5	72.3	67.9	84.0	87.1
1939	123.5	122.4	130.7	133.4	130.1	86.3	83.1	95.1	97.4
1940	126.3	125.1	132.2	135.1	131.4	91.0	89.0	96.9	98.5
1946	181.8	182.4	177.2	179.0	174.8	148.1	149.2	136.8	136.4
1947	219.3	222.0	207.6	207.5	203.8	180.4	184.0	158.1	157.1
1948	250.1	251.6	239.4	242.2	235.6	199.2	202.5	178.8	178.8
1949	243.7	240.8	242.8	246.4	240.0	189.3	189.9	180.6	180.8
1950	256.2	254.5	249.5	251.5	248.0	194.3	196.2	185.4	183.7
1951	273.2	271.3	263.7	265.2	262.2	212.8	214.6	204.2	202.8
Jan. 1952	278.5	275.3	270.3	274.2	270.0	217.5	219.8	210.1	208.1
Feb. 1952	278.3	275.1	270.1	274.1	270.4	217.8	220.1	210.5	207.7
Mar. 1952	277.2	273.7	269.9	274.0	270.1	217.8	220.1	210.5	207.7
Mar. 1952	124.5	123.6	% increase over 1939		106.5	105.4	107.6	% increase over 1939	
						152.4	164.9	121.3	113.2
									122.9

ATLANTA

ST. LOUIS

1925	118.6	118.4	116.3	118.1	114.4	91.0	86.5	99.5	102.1	98.0
1930	108.9	108.3	112.4	115.3	111.3	90.8	86.8	100.4	104.9	100.4
1935	95.1	90.1	104.1	108.3	105.4	89.5	84.5	96.4	103.7	99.7
1939	110.2	107.0	118.7	119.8	119.0	105.6	99.3	117.4	121.9	116.5
1940	112.6	110.1	119.3	120.3	119.4	106.4	101.2	116.3	120.1	115.5
1946	167.1	167.4	159.1	161.1	158.1	159.7	157.5	157.9	159.3	160.0
1947	202.4	203.8	183.9	184.2	184.0	193.1	191.6	183.7	186.8	186.9
1948	227.9	231.2	207.7	210.0	208.1	218.9	216.6	208.3	214.7	211.1
1949	221.4	220.7	212.8	215.7	213.6	213.0	207.1	214.0	219.8	216.1
1950	232.8	230.7	221.9	225.3	222.8	227.0	223.1	222.4	224.5	222.6
1951	252.0	248.3	238.5	240.9	239.0	245.2	240.4	239.6	243.1	243.1
Jan. 1952	256.1	252.9	241.9	244.4	242.2	248.0	242.7	242.6	245.4	245.8
Feb. 1952	255.9	252.7	241.6	244.2	242.0	247.6	242.3	242.1	245.0	245.4
Mar. 1952	254.8	251.3	241.8	244.2	241.9	248.0	242.8	242.2	245.0	245.5
Mar. 1952	131.2	134.9	% increase over 1939			% increase over 1939				
			104.9	103.8	103.3	134.8	144.5	106.3	101.0	110.7

SAN FRANCISCO

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926-29 for that particular type — considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110
index for city B = 95
(both indexes must be for the same type of construction).
Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926-29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear regularly on this page.

another **HOMASOTE FIRST** — designed to reduce the cost of building

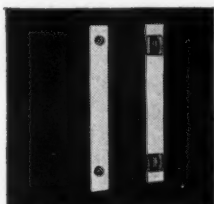
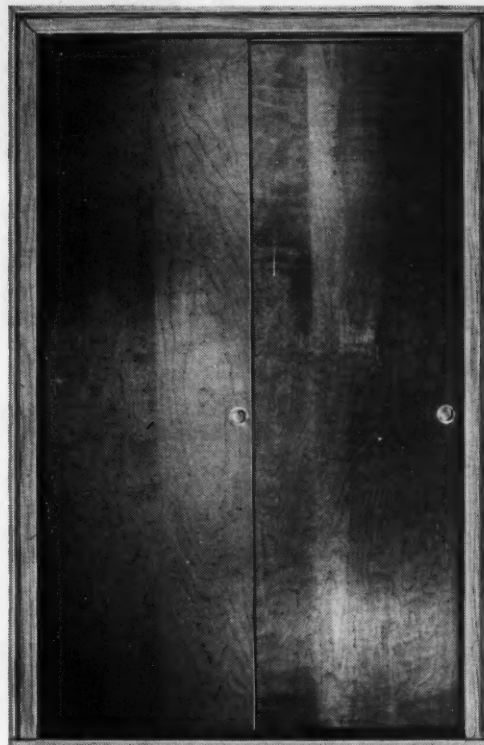
Three years of research and field testing are back of these Nova Roller Doors

Here are the most practical roller doors yet developed. Simple to install, easy to operate, and *economical in every sense*—these high quality, hollow core doors are light, strong and warp-resistant. Gone is all the expensive, overhead hardware—always difficult to install—always noisy. Two rollers revolving on pins act as guides at the top; two vulcanized rubber rollers carry the weight of the door at the bottom—through simple floor guides. There is no floor track. All hardware except floor guides is installed at the factory. Each door—Closet or Passageway—comes complete in one carton. In 30 minutes' time one man makes the installation.

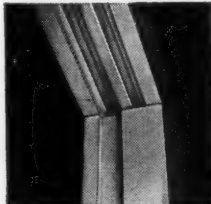
CLOSET DOORS

A closet or storage space may be one of the standard sizes—or extend the width of the room. Two or more doors enclose it entirely. Instead of exposing only part of the interior, as with a swinging door, you have full and easy access.

Nine standard opening sizes: 32", 36", 40", 48", 56", 60", 72", 84" and 96".
Five standard heights: 6'0", 6'6", 6'8", 6'10" and 7'0".



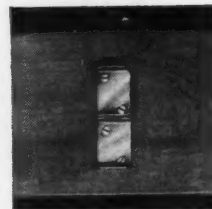
Revolving roller guides operate in head track; vulcanized rubber rollers run on finished floor.



Head tracks are accurately machined for perfect operation of revolving roller guides; side jamb is routed to receive the door.



Passageway door slides easily into wall pocket.



Simple floor guides, installed flush with finished floor, eliminate need for floor track.

PASSAGEWAY DOORS . . .

Each comes assembled in its wall pocket, ready to install for either plaster or dry-wall construction. Five standard opening sizes: 2'0", 2'4", 2'6", 2'8", 3'0".

Both Passageway and Closet Doors are hollow core flush doors, 1 3/8" thick, regularly sold in unselected gum, paint grade and in select White Gum, and Birch, stain grade. Other faces on special order.

We urge you to write today for the full details. Kindly include the name of your lumber dealer and address your inquiry to Department 35A.

A Novasco Product

NOVA SALES
TRENTON 3, N. J. *Co.*

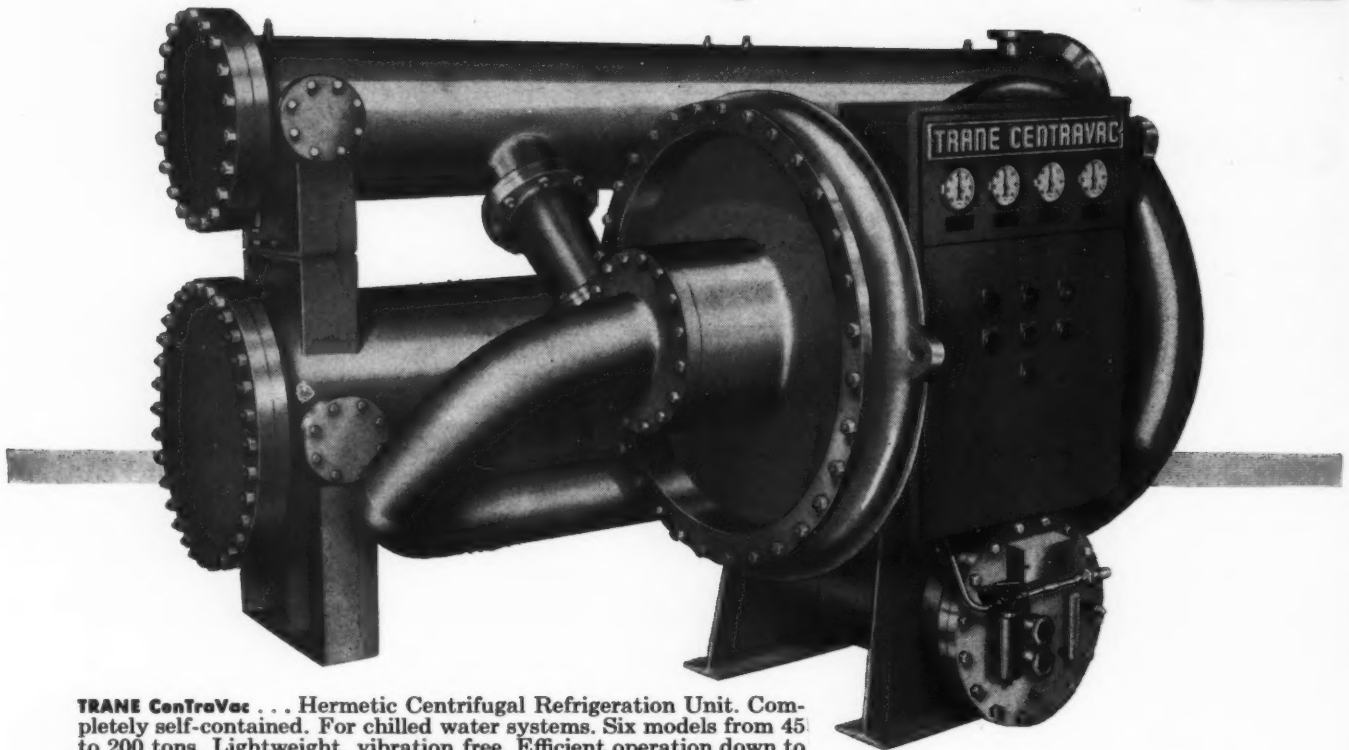


A wholly owned subsidiary of Homasote Company—manufacturers of the oldest and strongest insulating-building board; wood-textured and striated panels; 5/8" underlayment for 1/2" linoleum and wall-to-wall carpeting.



MATCHED EQUIPMENT

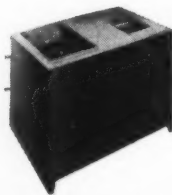
These **TRANE** products fit air conditioning results you



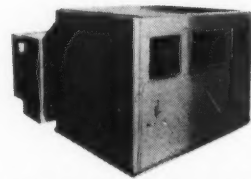
TRANE CentraVac . . . Hermetic Centrifugal Refrigeration Unit. Completely self-contained. For chilled water systems. Six models from 45 to 200 tons. Lightweight, vibration free. Efficient operation down to 10% of capacity, through automatic throttling controls. Power consumption very closely proportionate to load through entire range.



TRANE Climate Changers . . . basic air conditioning units, built for widest range of requirements. Combine coils, fans, humidifiers, filters, dampers. 450 to 22,000 cfm.



TRANE Evaporative Condenser . . . for condensing refrigerant in the air conditioning system where water is scarce or expensive. Cuts water consumption as much as 90%.



TRANE Multi-Zone Climate Changer . . . A single air conditioner that provides heat or cooling or both simultaneously to as many as 8 different zones.

MANUFACTURING ENGINEERS OF HEATING, VENTILATING

TO MATCH THE JOB...

together to give you the want !

What air conditioning results do you want? Have you a simple cooling problem—or a complex one? Is it small or large? Does the job require only cooling or does it involve the related problems of heating and ventilating?

Regardless of the nature or scope of your next air conditioning project, the *complete* line of TRANE matched air conditioning products contains exactly the equipment needed to do a superlative job.

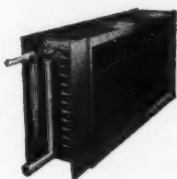
Consider these advantages:

1. UNDIVIDED RESPONSIBILITY The completeness of the TRANE line makes it possible to get the undivided responsibility of one manufacturer.

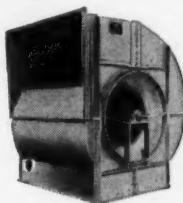
2. ONE SOURCE OF SUPPLY You save time by dealing with one competent specialist—the TRANE sales engineer—instead of many.

3. ONE SET OF CATALOGS From one handy and complete set of catalogs you can select all the equipment you need.

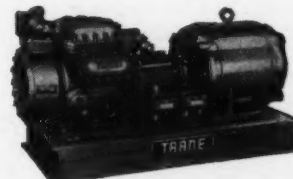
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REQUIRED READING



Facade of church, Rancho de Taos, N. M., 1772 (above). Above, right: Braferton Hall, College of William and Mary, Williamsburg, Va., 1723. Right: Richard Jackson House, Portsmouth, N. H., 1664



Thomas L. Williams



Samuel Chamberlain

EARLY AMERICAN ARCHITECTURE

Early American Architecture. By Hugh Morrison. Oxford University Press (114 Fifth Ave., New York, N. Y.), 1952. 619 pp., illus. \$12.50.

REVIEWED BY WALTER CREESE*

The last two years have given us, in quick succession, a series of extraordinarily careful studies of early American architecture, of which this book is the latest and most complete. First came Rexford Newcomb's *Architecture of the Old Northwest Territory*, then Anthony Garvan's *Architecture and Town Planning in Colonial Connecticut*. A more comprehensive work was *The Dwellings of Colonial America* by the late Thomas T. Waterman. The event of these successive publications is thrown into high relief by the recollection that not since 1922 and Fiske Kimball's monumental *Domestic Architecture of the American Colonies and the Early Republic* has there been any such thoroughgoing effort to

present an adequate picture of the periods between the sixteenth and the nineteenth centuries.

Why do we have this sudden feast of reason after a long and unreasonable intellectual drought? Obviously World War II and its aftermath have brought on an intense national curiosity about every aspect of our past culture. Architecture as the physical embodiment of the attitudes of our ancestors has currently the fascination of principles which have concrete reality (since many old buildings still exist), yet need description and exposition because they are not composed of words. The best of this present writing seems to arise from a reawakened conviction that we do not understand our own architectural tradition well enough.

Did we think we sufficiently understood it during the last three decades? The preceding concept seems to have been that our architecture was fundamentally colonial in the derivative sense: provincial and parochial. Mr. Waterman and Professor Morrison have documented and enlarged this assumption to

a degree. By carefully tracing to their European sources the Swiss, Swedish, Dutch, Flemish, German, French and Scotch influences on the plan and elevation of the houses along the Atlantic Coast, Mr. Waterman demonstrated that this colonialism, which we had tacitly assumed to be basically English, was derived instead from many roots. Mr. Waterman's earlier studies were mainly in the Virginia and North Carolina areas and he perhaps arrived at this insight more quickly for his previous experience. Professor Morrison was born and brought up in New England and it is upon him that we depend for an interpretation of the English idiom of that region. He discounts the popular conclusion that the first settlers began to exert an original approach to their building problems as soon as they landed in its inhospitable climate and ends his chapter on New England with the following thought:

It is perhaps less remarkable that the first colonists did not build better, than that they built as well as they did. Con-

(Continued on page 48)

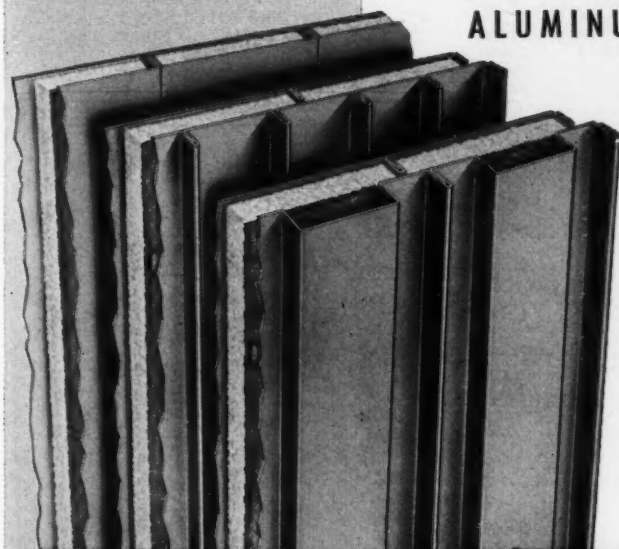
*Dr. Walter Creese, of the Faculty of Fine Arts, University of Louisville, is Editor of the *Journal of the Society of Architectural Historians*.



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REQUIRED READING

(Continued from page 46)

fronted by the myriad urgencies and difficulties of a pioneer existence, it was more than enough to equal the standard set by their forebears in a settled society and a secure existence. Civilization has always advanced in established societies, not on their pioneer fringes.

The general impression would seem to be then that our early architecture was only a rough facsimile of what had been done much better on the other side of the ocean in a number of parent countries. Our chief interest in early American architecture would thus have to arise from its location and not its intrinsic quality.

However, our appreciation of its variety began to increase with Mr. Waterman's research along the East Coast. Hugh Morrison includes this coastal strip in his discussion as well as the architecture of Florida and the Spanish Southwest, missions and ranch houses of Alta California, and French Colonial architecture of the Mississippi Valley. He does not confine himself to houses either: churches, forts, log cabins, markets, mills, public buildings, colleges and even the long-neglected barn come into the total view. He teaches us that while we have been searching for historical significance in one dimension, that is, in depth or quality, we should perhaps have been gaining greater satisfaction from another, its breadth or variety. The author has explained his purpose in writing the book as "grimly didactic." It is instead powerfully dramatic in its sweep and scope.

For instance, how many of us have truly realized before that the oldest surviving non-Indian building in the United States is the Palace of the Spanish Governor in Santa Fe (1610-14), that Spanish colonization was carried northward in California with an awareness of the possibility of the Russians moving south, and that the French, through the Ohio and Mississippi river valleys, once had a firm control over the heartland of America and a continuous architectural tradition that stretched from Quebec to the Gulf of Mexico?

Anyone who has consulted Professor Morrison's *Louis Sullivan, Prophet of Modern Architecture* of 1938 would correctly expect this book to be painstaking in its research and presentation. It takes many years and generations of students to acknowledge the large debt such a

(Continued on page 368)

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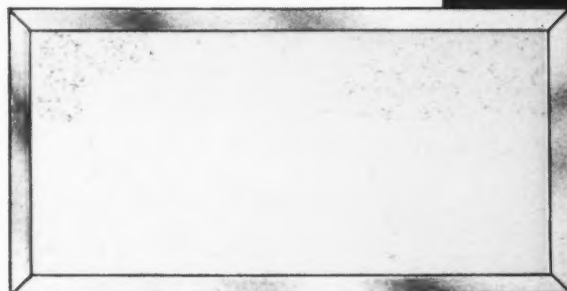
NU-RITE GLASS CRAYON BOARDS

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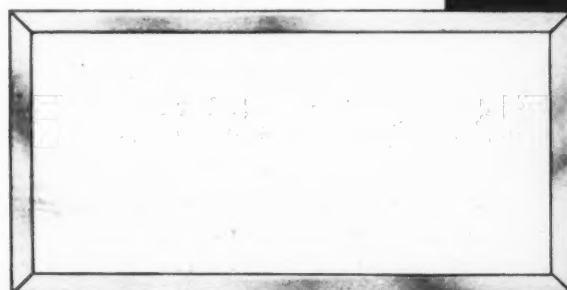
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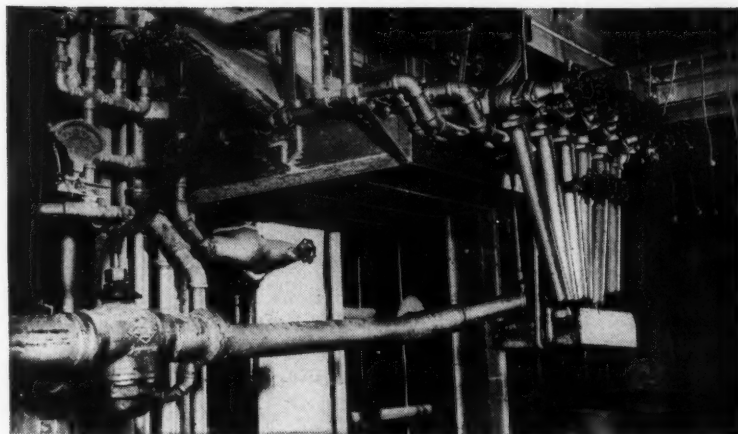
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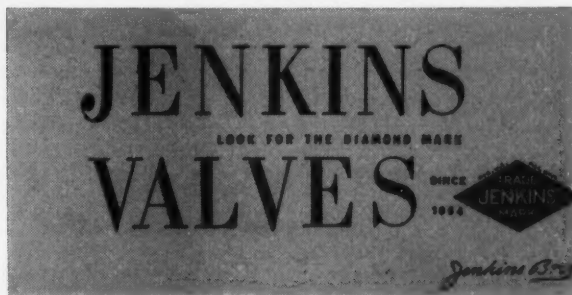
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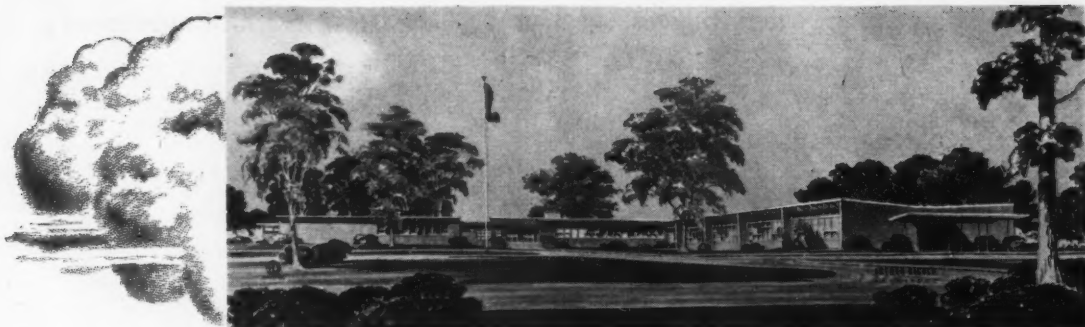
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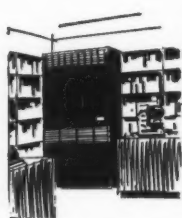
Arthur T. Vanderbilt Hall, new \$5,000,000 law center for New York University, faces historic Washington Square in downtown New York City. Architect: Eggers and Higgins; General Contractor: John Lowry, Inc.; Roofer: Zenith Roofing and Sheet Metal Co., Brooklyn, New York.

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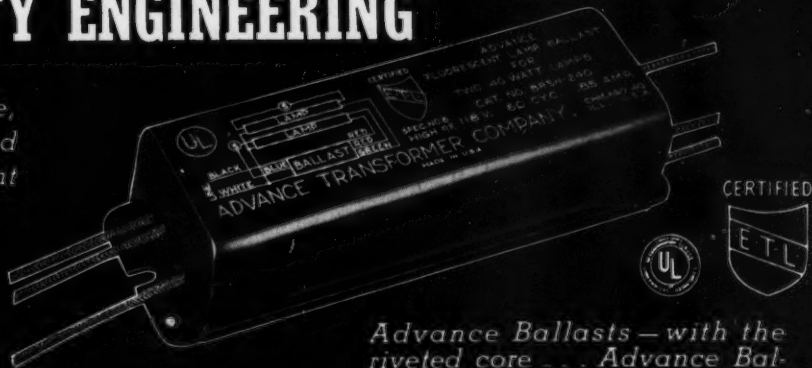
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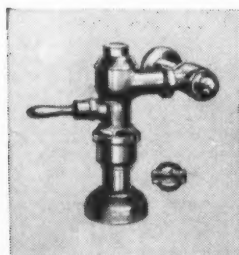
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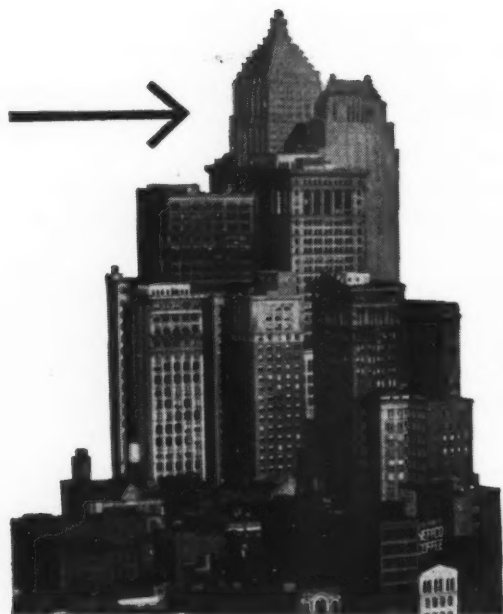
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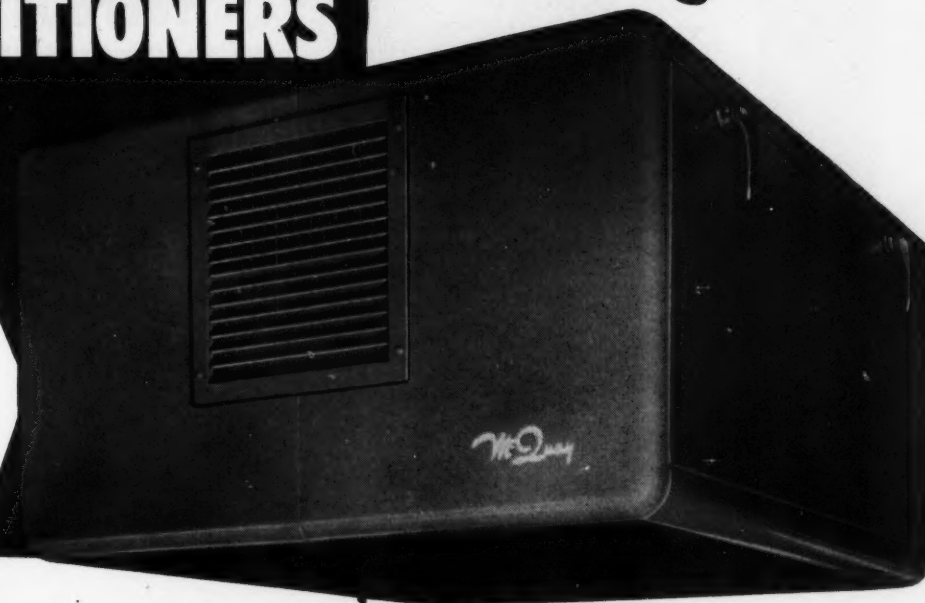
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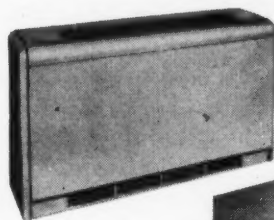
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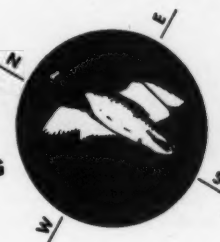
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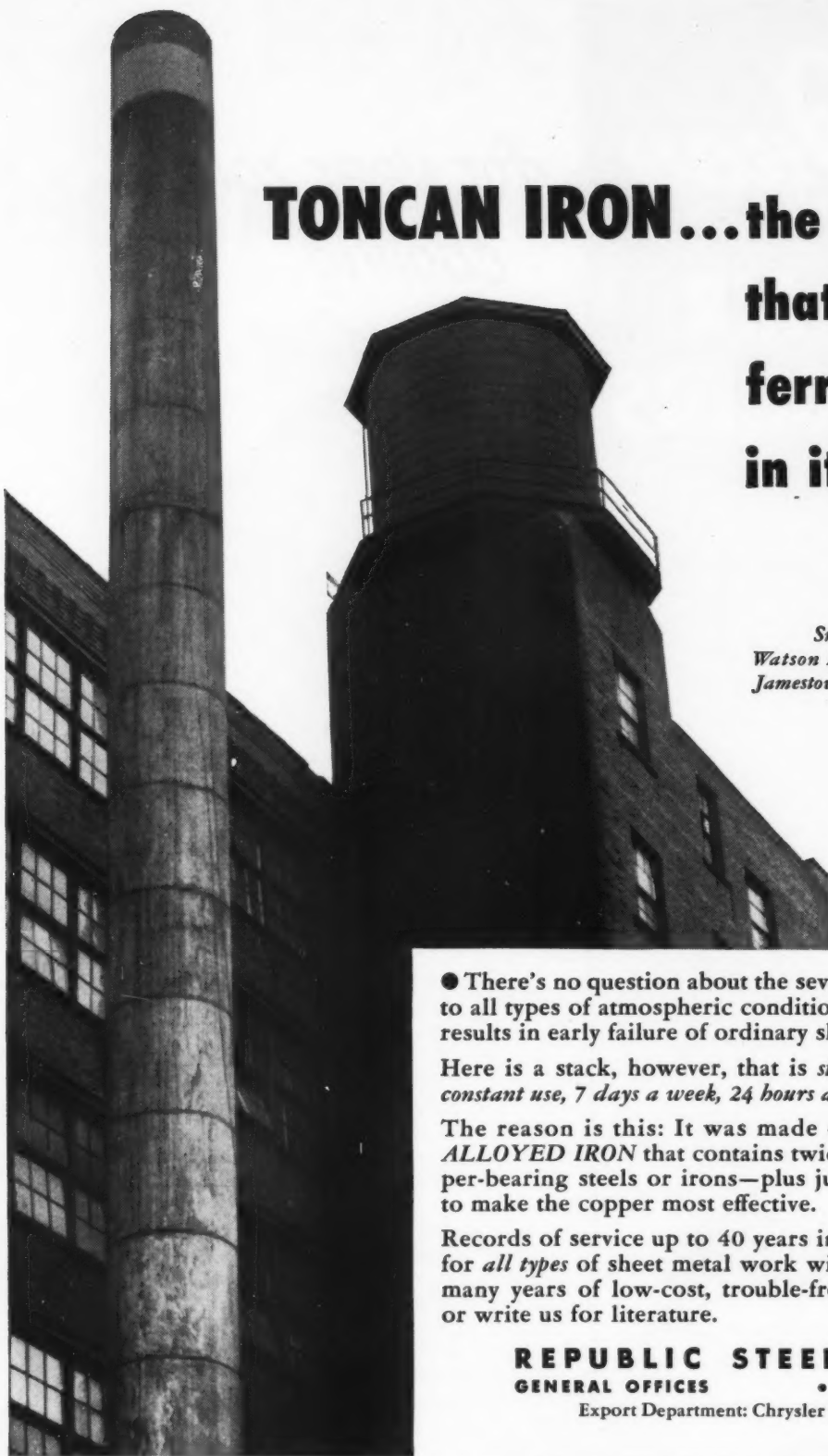
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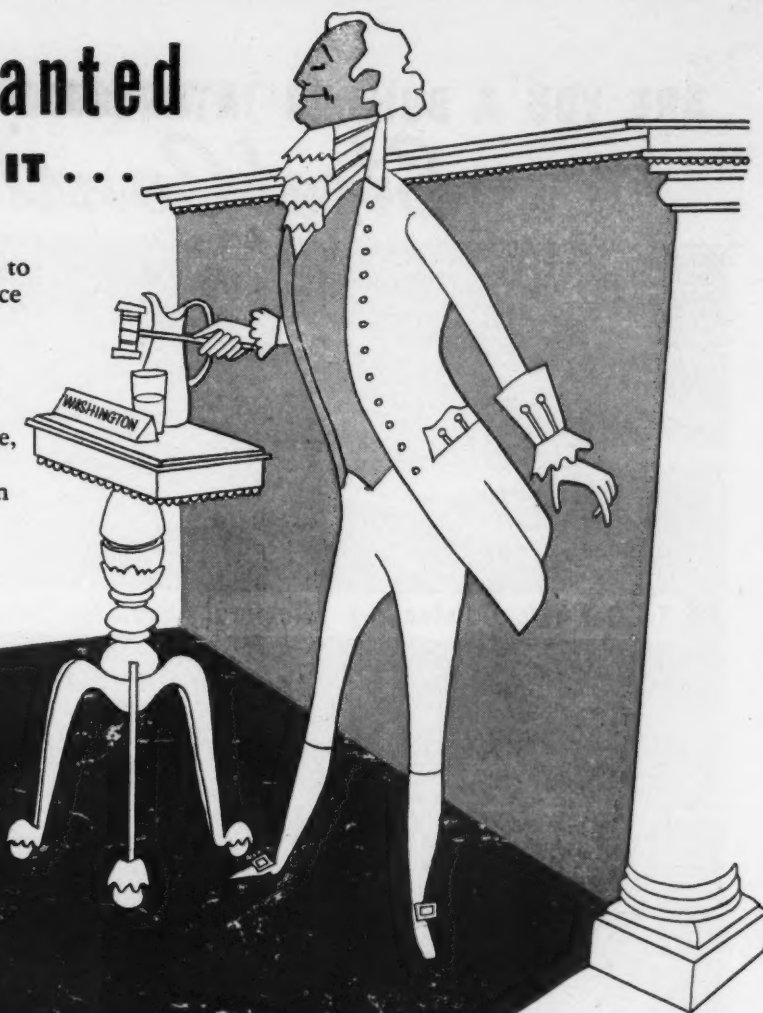
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gives you a solid anchor, prevents deep pockets of wasted concrete between joists.

MACOMBER NAILABLE STEEL JOISTS

NAILING

into V Joist Steel Top chords gives you a non-combustible anchor $2\frac{1}{2}$ times stronger than wood.

ARCHITECTS AND BUILDERS who consider fire-safety and the economy of ready-to-install steel members as essential ingredients of good construction have something very special in Macomber Steel Joists.

That special something is NAILABILITY.

These all-steel structural units have a nail gripping power $2\frac{1}{2}$ times that of wood.

Result? You can build fire OUT and safety IN when you specify Macomber Nailable Steel Joists.

In addition you can:

1. Attach centering faster with nails.
2. Prevent pockets of wasted concrete between joists when centering is stretched taut.
3. Build a fire barrier to floors above.
4. Prevent the unsightly results of shrinkage and deflection.

Yes—if you are a builder interested in Steel Construction, you pay no more for the ONE STEEL JOIST that gives you ALL of these advantages. Write us.



STANDARDIZED STEEL BUILDING PRODUCTS

MACOMBER • INCORPORATED

CANTON, OHIO

V BAR JOISTS • LONGSPANS • BOWSTRING TRUSSES • STEEL DECK



... because Kaylo Roof Tile is so **lightweight** yet strong
... and it also insulates ... protects against fire

Kaylo Insulating Roof Tile not only conserves steel by eliminating needless building weight—it provides a *better* roof deck. This revolutionary structural material is a hydrous calcium silicate. It has more than adequate strength for typical roof loads, yet a Kaylo deck weighs *only* six pounds per square foot. Therefore, a Kaylo roof deck means a lighter supporting structure—and important savings of steel.

Kaylo Roof Tile has high insulating value to save

on heating and cooling costs. Since the tile is also incombustible, fire originating above a Kaylo deck is prevented from producing dangerous temperatures within the building for a period of at least one hour.

And, a Kaylo deck can be erected rapidly. The lightweight Kaylo Insulating Roof Tile is easily handled and placed—forming a permanent, maintenance-free roof deck of simple and economical construction.

WRITE FOR FREE BOOK—"Kaylo Insulating Roof Tile." Address: Dept. N-215, Owens-Illinois Glass Company, Kaylo Division, Toledo 1, Ohio.



KAYLO ... *first in calcium silicate*

... pioneered by OWENS  ILLINOIS Glass Company

MAIN OFFICE: TOLEDO 1, OHIO — KAYLO SALES OFFICES: ATLANTA • BOSTON • CHICAGO • CINCINNATI • CLEVELAND • DETROIT
HOUSTON • MINNEAPOLIS • NEW YORK • OKLAHOMA CITY • PHILADELPHIA • PITTSBURGH • ST. LOUIS • WASHINGTON

fedders

A GREAT NAME IN COMFORT



RIVER HOUSE APARTMENTS

145 Pinckney Street, Boston, Mass.

Architect: E. T. Steffian

General Contractor: Industrial Engineering Company

Plumbing and Heating Contractor: C. H. Cronin, Inc.

FEDDERS-QUIGAN CORPORATION

convector-radiators

making warm friends in New Boston apartment house

* Hundreds of Fedders Convector-Radiators are contributing to the comfort and appearance of Boston's new River House Apartments.

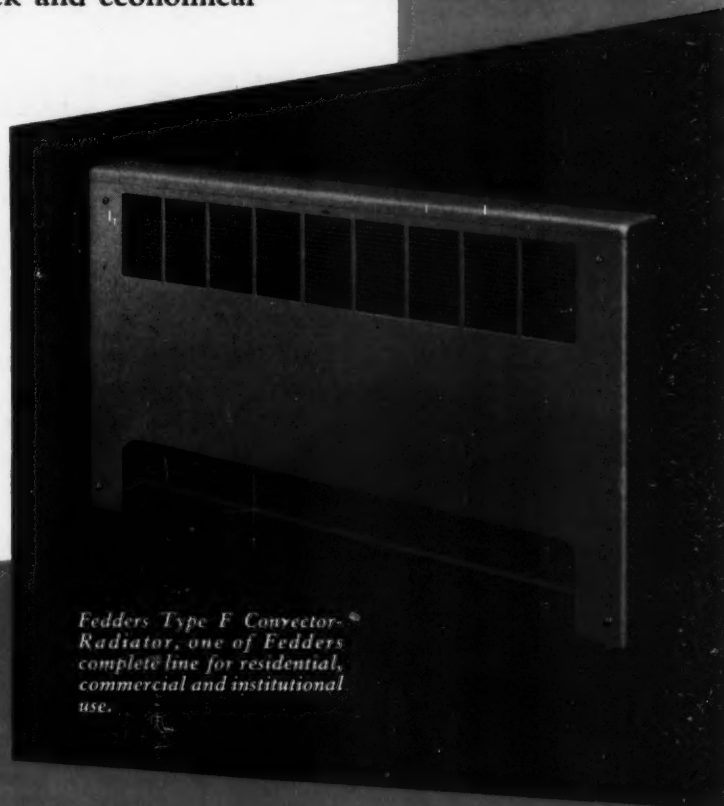
They are in perfect taste with handsome decorative schemes and furniture arrangements.

Architects, interior decorators and contractors are turning to Fedders Convector-Radiators across the nation for uniform floor-to-ceiling temperatures, quick response to modern controls, fuel economy and handsome appearance.

Fedders Convector-Radiators meet standard architectural and roughing-in dimensions . . . they are light in weight . . . compact in size . . . easy to stock and economical to deliver and install.

WRITE FOR CATALOG

The ratings of Fedders Convector-Radiators are in conformance with Commercial Standards CS140-47, as developed cooperatively by the trade and the National Bureau of Standards, U. S. Department of Commerce, and the said ratings have been approved by the Convector Rating Committee.



Fedders Type F Convector-Radiator, one of Fedders complete line for residential, commercial and institutional use.

57 TONAWANDA STREET, BUFFALO 7, NEW YORK



Bigelow adds a "Luxury" touch to the Frederick Martin!



THE new and beautiful Frederick Martin Hotel in Moorhead, Minnesota has rolled out 4,000 yards of Bigelow Carpet to welcome its guests!

From the handsome walnut paneled lobby to the guest rooms and suites to the Tree Top Room for dining, Bigelow adds that touch of "luxury" that only fine carpeting brings to a hotel!

The 4,000 yards of carpeting used was Bigelow's Beauvais, with approximately 2,500 yards in the same pattern.

Again, a modern hotel chooses to select Bigelow for its carpeting job. The reason is obvious: Bigelow pro-

vides the unbeatable combination of beauty plus wear plus rock-bottom cost!

This is typical of the hundreds of outstanding installations achieved by Bigelow's Carpet Council every year.

If you have carpet problems on your mind—contact this staff of experts today. They will work with you, your architect or your decorator—and give valuable advice on colors, patterns, and weaves in the price you prefer.

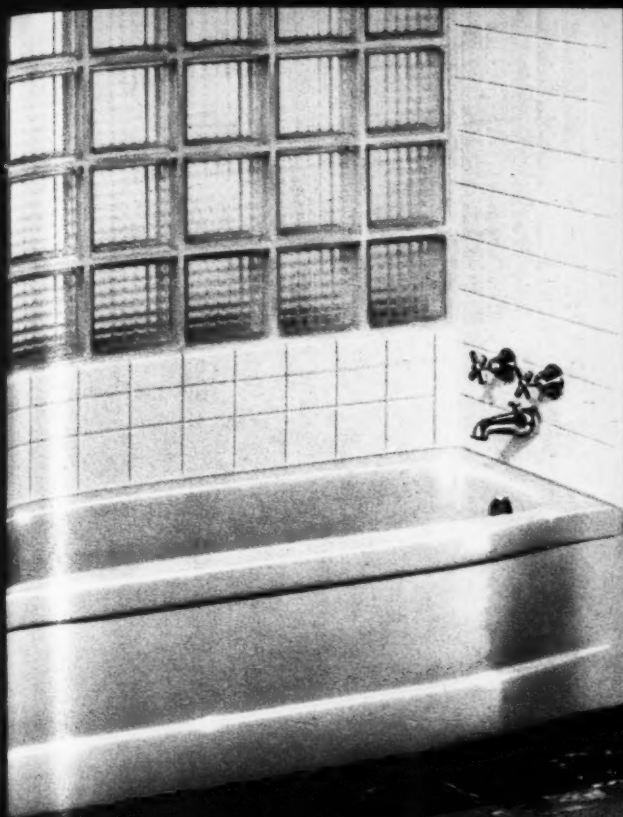
No charge for this service. Just write to Bigelow Carpet Council, 140 Madison Avenue, New York, N. Y. Your inquiry will receive *prompt* attention.

BIGELOW Rugs and Carpets

Beauty you can see ... quality you can trust ... since 1825



BEAUTI
The f
color
ments
Give
Ivory
are on



Cost-wise architects specify

BRIGGS *Beautyware*

... because it's free from trouble!



DURING THE A.I.A. CONVENTION, JUNE 24-27—
BE SURE TO VISIT THE BRIGGS BEAUTYWARE
INTERNATIONAL SHOWROOM, 101 PARK AVE., NEW YORK



BEAUTIFUL NON-FADING COLORS

The famous Briggs Beautyware decorator colors are widely known through advertisements in leading magazines across the nation. Give your clients Sky Blue, Sea Green, Ivory or Sandstone (shown at top). Prices are only slightly higher than plain white.

These days, more than ever, the practical architect considers the cost. That's why so many of the leading members of the profession are remembering Briggs Beautyware with increasing frequency when making specifications. The name Briggs Beautyware stands for outstanding quality in plumbing fixtures at a reasonable price. Furthermore, Briggs fixtures are economical to install—because they're trouble-free! All unneces-

sary dead weight has been eliminated—they're easier to handle. Exact dimensions make them easier to install. The tiling-in flange prevents leaks—cuts costly, time-consuming repairs after installation. Special under-tub framework assures permanent level installation independent of wall support. Home owners really like its beauty, durability and economy! For so many reasons, you *can't* go wrong specifying Briggs Beautyware!

BRIGGS MANUFACTURING COMPANY • 3001 MILLER AVENUE • DETROIT 11, MICHIGAN

© 1952

EASIER TUB INSTALLATION

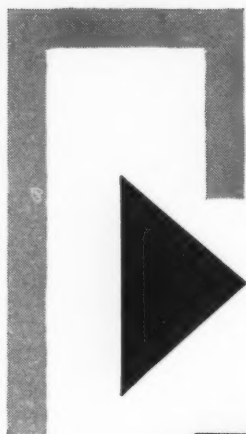


There is no need to cut and fit adjoining wall tile when installing a Briggs Beautyware bathtub. The newly redesigned Briggs tubs have a perfectly vertical edge at the panel ends—simplifying and speeding installation.

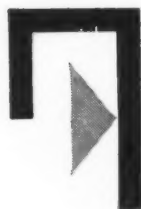
ACID-RESISTANT LUSTER



Briggs makes only one quality—the best. Every piece of Briggs Beautyware is thoroughly resistant to medicines, washes, lotions and acids normally found in the home. Fixtures look new longer! Owners are delighted!



*as fundamental as
interior trim...*



*A good plan
is always better
when it includes
symbols for
telephone outlets.*

Interior details are often the most important details to your clients. And one they'll rate high is concealed telephone wiring. Because raceways, built into the walls during construction, protect the beauty of thoughtfully designed walls and woodwork. Specifying conduit for telephone wires is standard practice with architects today. Your Bell Telephone Company will be glad to help you lay out economical raceway installations. Just call your nearest Business Office.

BELL TELEPHONE SYSTEM

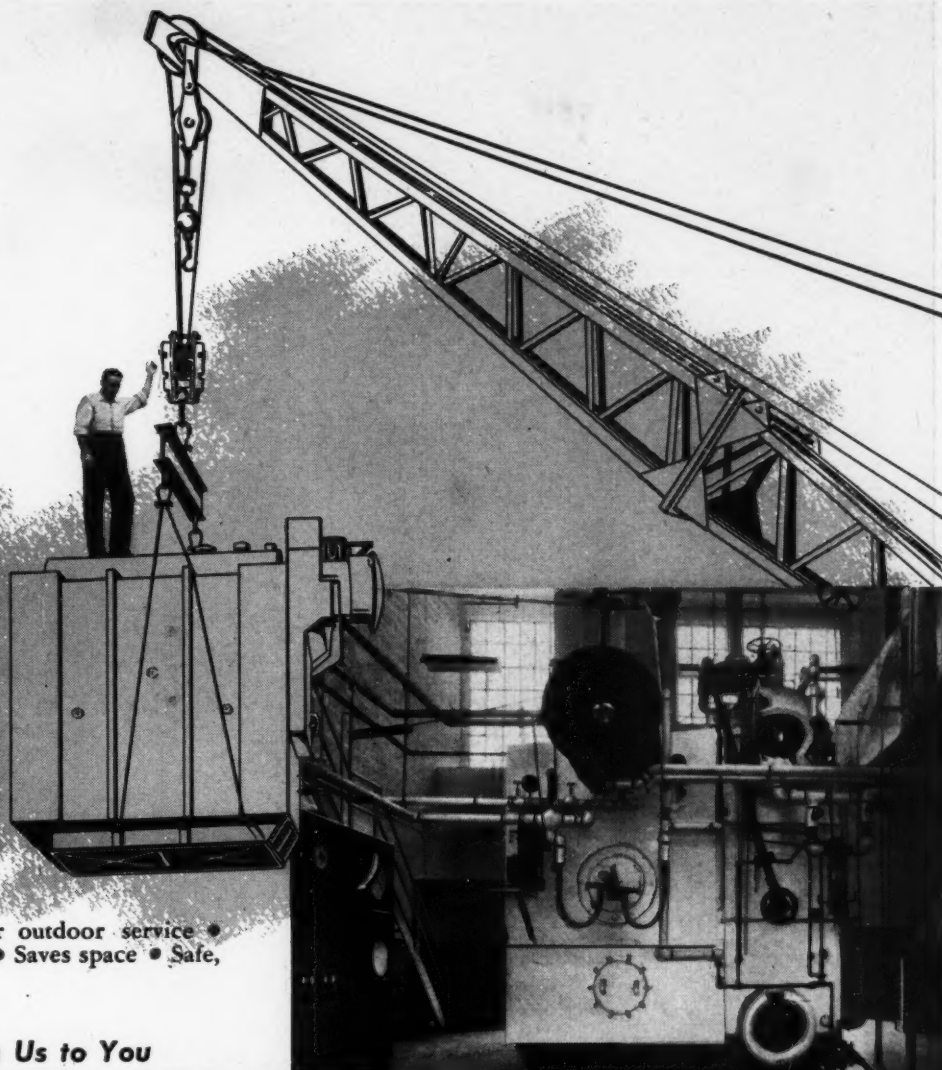


IF YOU WANT TO

Bring Steam Costs Down

CONSIDER THIS
Factory-assembled,
Self-contained B&W
Integral-Furnace Boiler,
Type FM

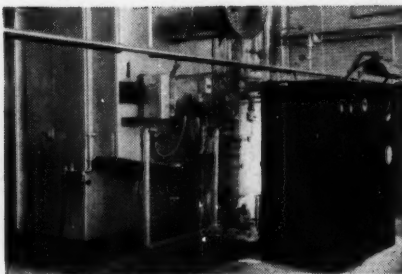
- Saves erection time and cost
- Meets wide range of services
- Handles quick load changes
- Fast steaming
- Low maintenance
- Easy accessibility
- Suitable for outdoor service
- Burns oil and or gas
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- Safe, automatic operation.



It Is Easily Shipped from Us to You



By Truck . . . By Rail



Set it down where you want it . . . Set it up in a hurry

Steam Capacities
2900 to 28,000 lb. per hr.
at 15 to 250 psi

There's no law against buying more than one FM unit if you need BIG BOILER capacity. Many companies have, and pocketed the money they would otherwise have spent tearing their buildings apart to put in a large boiler. Ask your nearest B&W man to explain the economical service you can expect from Type FM boilers . . . or send for Bulletin G-76.

THE BABCOCK & WILCOX COMPANY
BOILER DIVISION
85 Liberty Street, New York 6, N. Y.



**BABCOCK
& WILCOX**

G-564



New High School in Western New York—This recently completed two-story structure, the Williamsville Junior-Senior High School, Williamsville, N. Y., has facilities for 1000 students. The building is 325 ft long and 350 ft deep, and has 30 classrooms, an auditorium, gymnasium, swimming pool, library, industrial arts shop, laboratories, music rooms and cafeteria. Its attractive exterior of red brick and gray limestone covers a 600-ton steel framework of Bethlehem Structural Shapes.



General Contractor: The John W. Cowper Co., Inc.; Architect: Duane Lyman and Associates; Consulting Engineer: T. H. McKaig; Steel Fabricator and Erector: Buffalo Structural Steel Corp.

**A Booklet Architects Will Welcome
...The Only One Of Its Kind**



**NEW . . . BOOKLET SHOWS HOW TILE IN INDUSTRY CAN
BOOST *Morale* . . . CUT *Maintenance***

For some time we have felt that there was need for some literature to which architects could refer when planning tile installations for industrial buildings. Now, for the first time, it's available. American-Olean's new Booklet 300 gives you all the facts, in concise, complete form.

This new booklet shows you how and why plant rest areas can work for management, boosting morale and reducing maintenance costs.

You will find page after page of full color photographs of actual installations in plants such as Esso Standard Oil and Standard Pressed Steel Co. A group of

color combinations of floor and wall tile especially selected for industrial and institutional use is shown, complete with specifications.

A copy of this booklet is being mailed direct to most architects. If you have not received yours, or if you would like additional copies, we will be glad to send them to you.

AMERICAN-OLEAN TILE COMPANY
930 Kenilworth Avenue, Lansdale, Pa.

Gentlemen:

Please send me, without obligation, my copy of your new booklet on Modern Industrial Washrooms.

Name

Title

Firm Name

Address

City State

American-Olean Tile Company



Architects,
Carson & Lundin;
consulting engineers,
Jaros, Baum & Bolles;
general contractor,
Turner Construction Co.;
owner,
Massachusetts Mutual Life Insurance Co.;
agent,
Leonard J. Beck, Inc.

Who has it soft at Sinclair Oil?


In New York City's new 27-story Sinclair Oil Building, just about everybody has it soft. A Carrier Conduit Weathermaster* Air Conditioning System sees to that.

The Conduit Weathermaster System lets each tenant dial the climate level he personally prefers. But even more important, he gets *better air conditioning* than any other system could give him. And this is true because the Conduit Weathermaster System *centralizes control* of temperature, humidity, ventilation, air movement and air cleaning.


For example, because all functions of year-round air conditioning are centrally controlled, dehumidifying may go on independently of the cooling — unlike various other systems — so occupants are kept comfortable even on the muggiest of days. There are no holes in the walls, or fans or motors in each room. No matter how the wind is blowing outside, building temperature and humidity are controlled on all floors — summer and winter. It's as comfortable on the 27th floor at Sinclair Oil as it is on the 2nd or the 15th.

There's more to the story, of course. The Carrier office nearest you will be glad to tell you the rest. Or our booklet, "Conduit Weathermaster System," will help you. Just write Carrier Corporation, Syracuse, N. Y. . . . for 50 years — *the people who know air conditioning best.*

*Reg. U. S. Pat. Off.



**AIR CONDITIONING
REFRIGERATION
INDUSTRIAL HEATING**



Refrigeration for the new Sinclair Oil Building is supplied by four 275-ton Carrier Absorption Refrigerating Machines (similar to this one) placed on the roof.

849 Weathermaster room units (like this one) give individual, automatic control of climate, prevent drafts the year around.

THE OLD WAY:
strong contrast
deep shadows



the
GUTH WYTE-LINER WAY:
low contrast
soft shadows

ALL POLAR BEAR WHITE — FOR BETTER SIGHT AND BETTER LIGHT



Here's a new idea in factory lighting to lift the eyestraining gloom off the ceiling:

ALL WHITE INSIDE—to reflect maximum light down and outward onto the working area.

ALL WHITE OUTSIDE—to reflect room light upward, brighten the ceiling and soften brightness contrast.

Easier to clean—reduces maintenance. Air-flow Channel circulates air currents for longer ballast life.

GUTH Wyte-Liners are made in 2 and 3 lamp sizes for conventional 40-watt lamps and for 4- and 8-ft. Slimline. May we send you our 16-page Catalog 48-J with complete details?

Guth

LIGHTING

THE EDWIN F. GUTH COMPANY / ST. LOUIS 3, MISSOURI

Leaders in Lighting Since 1902

SAVE THOUSANDS OF DOLLARS EVERY YEAR

...use Fenestra
super-galvanized
steel windows

2/23/52

STATEMENT

For Window Painting
for typical factory

Labor		
Material (Paint)	2100	00
Overhead	700	00
Scaffolding		
Ladders		
Brushes		
Drop Cloths		
Insurance		
Cartage		
Profit	525	00
	280	00
Total	\$3605	00

No more bills for the expensive time and labor and materials involved in painting windows every few years. Save thousands of dollars every year by insisting on Fenestra* Super Hot-Dip Galvanized Steel Windows!

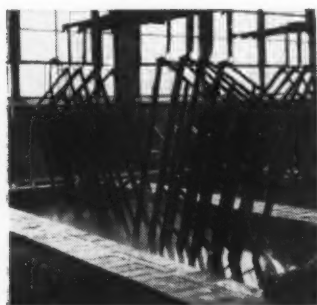
Here's why they are called *Super Galvanized*: Fenestra has developed a Hot-Dip Galvanizing system designed specifically for steel windows, and has built a special plant around it. It is the only one of its kind in America.

Completely automatic controls move Fenestra window assemblies through a series of special tanks where they are cleaned and pickled, rinsed, fluxed, dried, galvanized and Bonderized. Timing, temperatures—every step—is laboratory controlled.

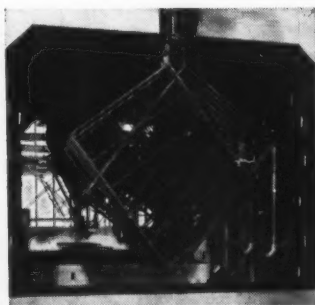
So add Super Hot-Dip Galvanizing to your present list of Fenestra advantages...such as integral ventilator butts that increase window strength, precision machining of window bars for perfectly uniform window size, automatic assembly of ventilators for perfect permanent fit, continuous double contact for weather-tightness all around vent openings, rigid *interlocking* muntin joints.

And, remember, Fenestra's volume production, permitted by standardization of types and sizes, gives you high-quality Fenestra Steel Windows at remarkably low cost.

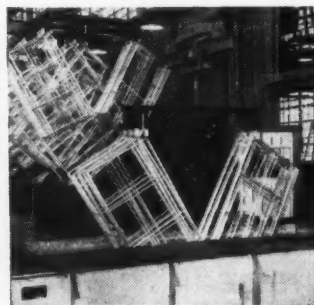
Call your Fenestra Representative or write Detroit Steel Products Company, Dept. AR-6, 2252 East Grand Boulevard, Detroit 11, Michigan. *®



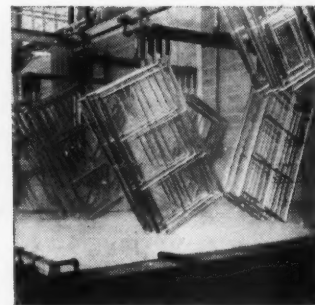
FLUXING. After cleaning, pickling and rinsing, Fenestra Windows dip into a flux bath that provides a film to prevent contamination of the cleaned steel as it passes to galvanizing tank.



DRYING. In this oven, the flux is dried on. Of course, in the galvanizing tank, this protective coat of flux volatilizes on contact with the molten zinc to permit a strong zinc-iron bond.



GALVANIZING. Assemblies dip deep into molten zinc, and come up with a heavy, smooth, uniform coating. Temperature and timing are automatically controlled with laboratory accuracy.

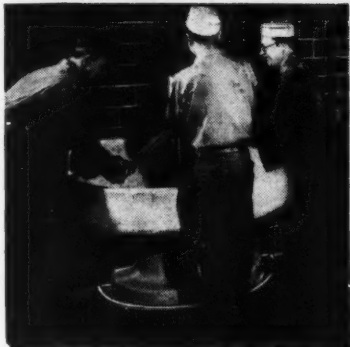
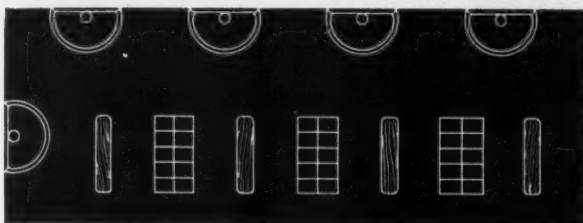


BONDERIZING. Here you see the galvanized assemblies being Bonderized to give the surface a soft silver color and to provide a holding surface for decorative paint, if it is ever desired.

Fenestra SUPER HOT-DIP
GALVANIZED STEEL WINDOWS

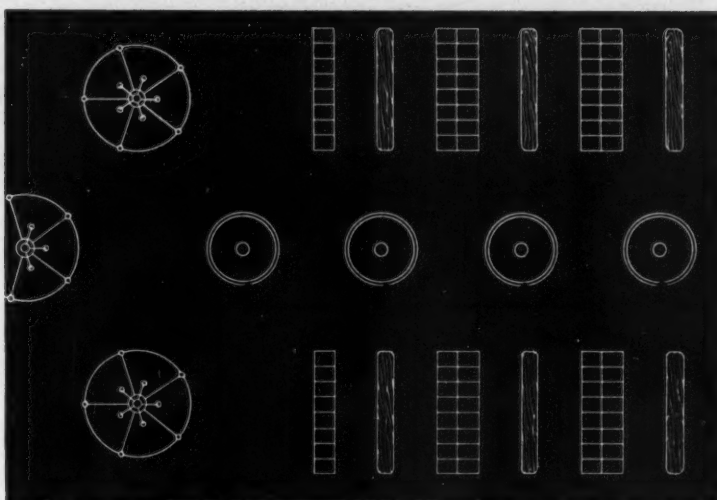
from America's first plant especially designed to galvanize steel windows

Select The BRADLEYS That Suit Your Needs



In narrow washroom areas as above—semi-circular or wall type Bradleys are well adapted. Up to six persons are accommodated simultaneously at the 54-in. model.

At right is a combination of four 54-in. full circle Washfountains, two 5-stall and one 3-stall Bradley Showers.



Each Provides The Utmost in Safe, Clean and Sanitary Washing

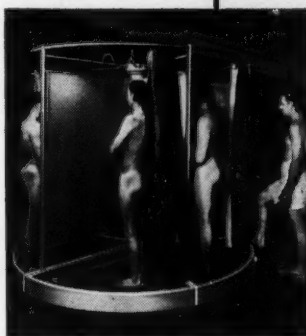
• Whether washing facilities are required for large groups or small, there is a sanitary Bradley Washfountain or Multi-Stall Shower that meets your exact requirement.

As the illustrations show there are 54-inch full circle models that serve 8 to 10 simultaneously, 36-inch models, wall mounting types, all furnished in various precast stone materials or enamel iron. (Stainless steel not available at present.) All have the central sprayhead in place of faucets, save space and reduce piping connections.

Bradley Multi-Stall Showers are made in 5- and 3-stall models and as a multi-person shower without divided stalls.

For the smaller washroom,—for such locations as cafeterias, laboratories, the Bradley DUO-Washfountain has the sanitary sprayhead and foot-control—(no faucets to touch).

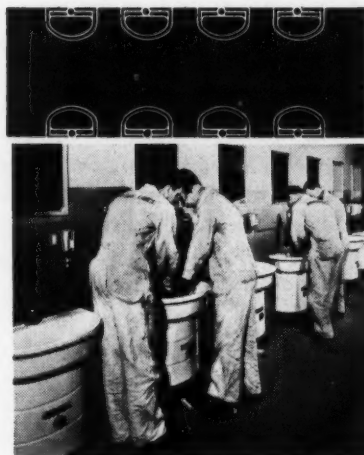
Information and data in our revised Catalog 5204 will help you make your final selection. Copy on request. BRADLEY WASHFOUNTAIN CO., 2227 W. Michigan St., Milwaukee 1, Wis.



Bradley 5-Stall Group Shower (also furnished as Column Showers without stalls).



Up to 10 persons are served at a 54-in. circular Bradley.



Women workers and girls in schools and institutions enjoy the sanitary washing features Bradleys provide. For children, juvenile height pedestals are available.

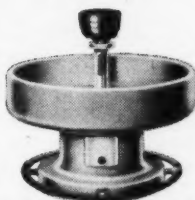
DUO-Washfountains for smaller washrooms, in groups or singly located in cafeterias, laboratories, etc.



Catalog 5204 mailed on request.

Distributed through Plumbing Wholesalers

BRADLEY
Washfountains



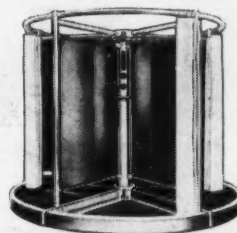
Full circle 36-in. and 54-in.



Semi-circular 36-in. and 54-in.



The Duo



Multi-Stall Shower



Column Shower



Drinking Fountain



Nail down building costs with PlyScord® Subflooring

THE REAL STORY of construction costs isn't always shown on the bill of materials. It's the *applied* cost that counts! PlyScord subflooring can be laid in less than half the time required for lumber subflooring. Big, work-speeding panels are light, easy to handle . . . cover large areas quickly . . . fit standard joist spacing without wasteful sawing and fitting . . . require far fewer nails.

PlyScord subflooring means *better* construction, too. Plywood's rigid plate-like action protects against violent racking action of wind or earthquake. Strong, rigid panels provide a solid, squeak-free base for finish flooring . . . protect against drafts from below. PlyScord subfloors won't cup, shrink or swell. Result: finish floors look better, last longer.

Plan now to include PlyScord in your next bill of materials—for better construction, for building economy.



Douglas Fir
Plywood

AMERICA'S BUSIEST BUILDING MATERIAL



● PlyScord is the unsanded construction grade of interior-type plywood bonded with highly water resistant glues. For subflooring, sheathing, backing, one-use forms. PlyScord is a registered grade-trademark identifying quality plywood manufactured in accord with U. S. Commercial Standards and inspected by Douglas Fir Plywood Association (DFPA).

PANEL DISCUSSION

Plywood Creates Unusual Home

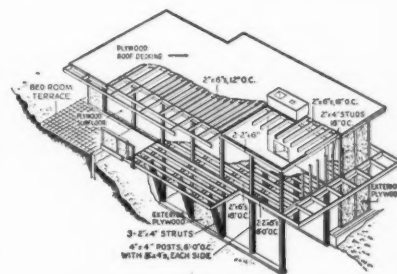
An excellent example of how well Douglas fir plywood lends itself to contemporary design is this award-winning California home by Architect Gordon Drake of Carmel and San Francisco.

"Because plywood is at once a structural material and a finish material, offering both strength and beauty, plywood made possible many building economies in the house," explains Architect Drake. "The material permits new architectural concept which enables the designer to concentrate on essentials without sacrificing beauty, charm or utility."

Plywood imparts needed structural strength and rigidity to the seemingly fragile structure and also serves as attractive exterior siding and interior wall



paneling. The isometric shows elements of post and girder construction which employs plywood as structural diaphragm for floor and roof and as a structural skin for walls.



Shelf-Door Wardrobe

Complete plans and bill of materials for the shelf-door wardrobe which was awarded first prize in the national architectural contest for plywood built-ins may be obtained free of charge from Douglas Fir Plywood Association, Tacoma 2, Wash. Designed by Edward Hanson, Stillwater, Minn., the plywood built-in makes use of shelves and bins on the inner door faces to provide extra storage space. Drawer space is provided both below the main unit and inside the roomy wardrobe section.

advertisement

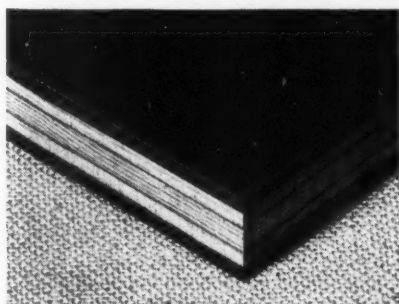
Prefabricator Cuts Costs With Plywood

Douglas fir plywood, which has been synonymous with prefabrication since 1935 when the first "stressed skin" plywood house was built by the U.S. Forest Products Laboratory, today remains the leading material for line production of modern housing.

Evidencing this fact are the comments of H. Arthur Tucker of Southern Mill & Manufacturing Co., Tulsa, Okla. The firm is one of the nation's pioneer prefabricators, having mass-produced houses for over 32 years—largely for petroleum industry housing projects. Says Tucker of plywood: "Plywood wall and roof sheathing and subflooring are, of course, far stronger and more rigid than other materials. But it cuts costs, too. Plywood wall and roof sheathing cost about 85% as much as 1" boards and can be installed in 40% fewer man hours. Considering time, labor and material savings, plywood subfloors cost less, too. Plywood's light weight means an average savings of \$30 to \$50 per house in shipping costs and greatly speeds site assembly."

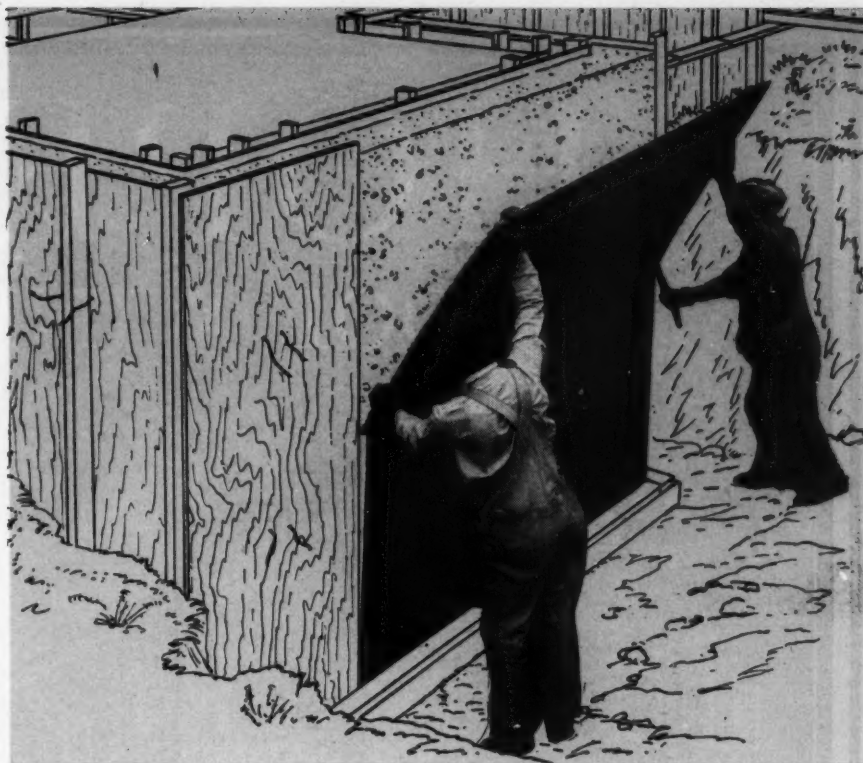
New Panel Material

West Coast plywood manufacturers are now mass-producing a new panel material which combines smooth, hard, wear-resistant hardboard surfaces with a backbone of Douglas fir plywood. Named Plyron, the material has already proved successful for such diverse uses as cabinets, concrete forms and flooring. Faced



with hardboard which provides an ideal base for smooth paint finishes, Plyron relies on plywood inner construction to furnish the "muscle," making it puncture-proof, dimensionally stable and relatively light weight. The material has excellent nail holding properties and retains the easy workability of plywood. Rigid industry quality standards have been established for Plyron, similar to those for Douglas fir plywood.

advertisement



Bargain Basements-Easy with Double-Duty PlyScord® Forms

Put a *two-way* squeeze on building costs by using the PlyScord grade plywood first for concrete formwork, then for sheathing or subfloors. PlyScord saves form-work time and labor costs . . . creates attractive, fin-free concrete surfaces—especially important for inner basement walls, retaining walls and exposed concrete on hillside homes.

After use as form panels, use PlyScord for strong, rigid wall and roof sheathing . . . tight, firm subfloors . . . or backing for thinner, more-expensive wall paneling. PlyScord cuts costs here, too. Big panels speed application of subflooring by 50% . . . wall and roof sheathing by 25%.

The highly water resistant (but *not* waterproof) glues used in PlyScord easily withstand use as one-use forms or other occasional wetting on the job. PlyScord is light, strong, amazingly tough. Won't split or puncture. Big, exact size sheets reduce waste . . . work with ordinary tools.

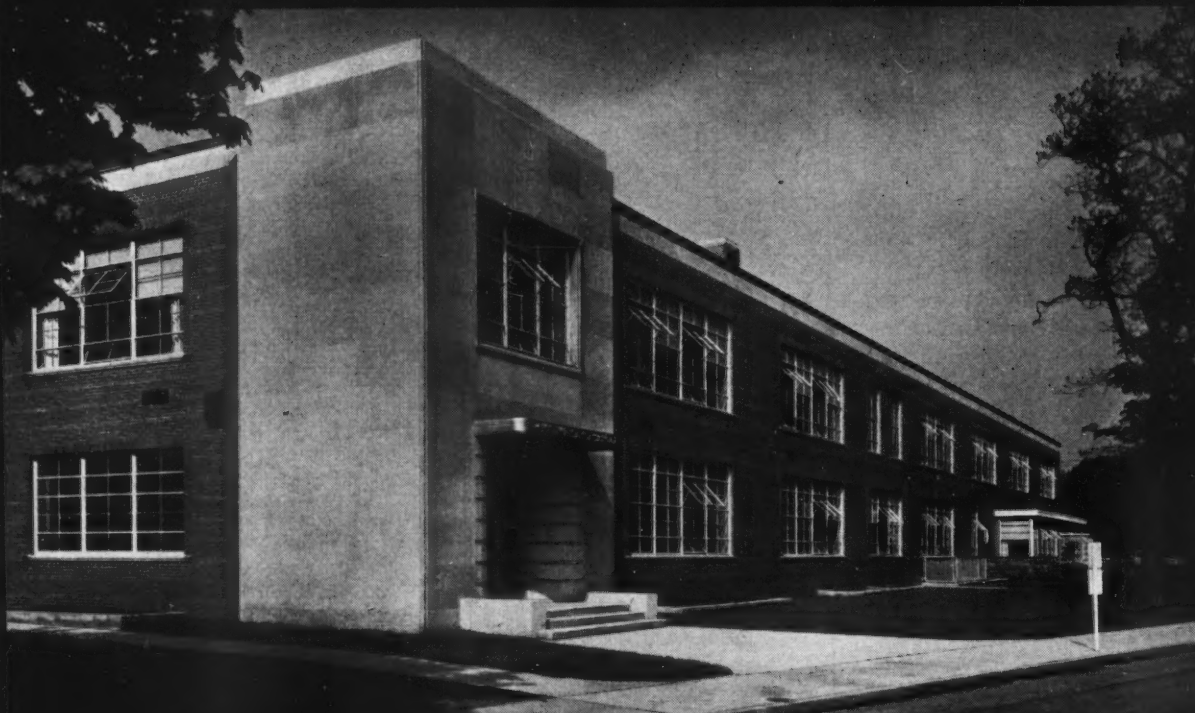
Douglas Fir
Plywood

AMERICA'S BUSIEST BUILDING MATERIAL



● PlyScord is the unsanded construction grade of interior-type plywood bonded with highly water resistant glues. For subflooring, sheathing, backing, one-use forms. PlyScord is a registered grade-trademark identifying quality plywood manufactured in accord with U. S. Commercial Standards and inspected by Douglas Fir Plywood Association (DFPA).

The Name **HOPE'S** *Guarantees*
SCHOOL WINDOWS



*Addition to Chestnut Street School, West Hempstead, N. Y., Frederic P. Wiedersum, Architect
 O'Driscoll Construction Corp., Contractors*

A glance at this pleasing school exterior shows plainly that the interior is also completely satisfying.

Large openings, making a "window-wall" of Hope's Steel Windows in each classroom, give full daylight and an easily adjusted brightness pattern, providing correct natural illumination on every desk.

Clear glass set in narrow steel frames, offers the restfulness and hygiene of distant vision to young eyes that need frequent relief from close work.

Note also that the ventilating casements are convenient to operate and assure perfect control of fresh outdoor air.

Such school rooms foster superior health records. Also, when Hope's Steel Windows are used, they provide most satisfying records of economy in construction and maintenance.

Write for Hope's Catalog and illustrations of school fenestration. Hope's Engineering Department, experienced in hundreds of school window installations, is at your service.

HOPE'S WINDOWS, INC., Jamestown, N. Y.

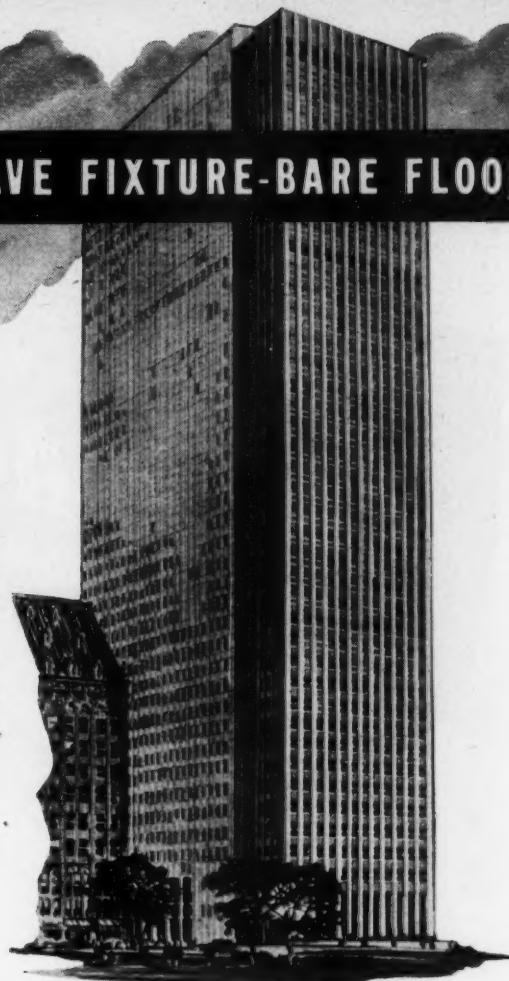
THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS

ZURN

TYPE REST ROOMS HAVE FIXTURE-BARE FLOORS



THE ZURN WAY RELIEVES THE WALL OF ALL THE LOAD

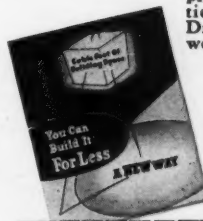


Pittsburgh's new 525 William Penn Place Corporation Building houses the U. S. Steel Company, Mellon National Bank & Trust Co. and T. Mellon and Sons. Architects: Harrison & Abramowitz, N. Y.; Consulting Engineers: Meyer, Strong & Jones, N. Y.

Pat. & Pat. Pending

Perpetual cleanliness in rest rooms of an ultra-modern skyscraper is a must. Immaculate cleanliness is no problem where plumbing fixtures are off the floor, because there is nothing to interrupt the sweep of the broom and the swish of the mop. Fixture-Bare Floors reduce the day-by-day dollar cost of maintenance to an all-time low, while lifting sanitation to a new high. The New Way of building utilizes wall type plumbing fixtures throughout, installed the Zurn Way—the simple, safe way of installing wall type closets, lavatories, sinks, and other fixtures. This New Way saves time and labor, reduces the use of building material and protects rest rooms from premature obsolescence. Specify wall type plumbing fixtures installed with Zurn Wall Type Closet Fittings and Carriers. Write for booklet entitled, "You Can Build It (Cubic Foot of Building Space) For Less A New Way".

The hundreds of plumbing fixtures in this building, such as wall type closets, lavatories and sinks, were installed with Zurn Wall Type Closet Fittings and Carriers which give maximum protection against premature obsolescence of sanitary facilities. Zurn Engineered Floor and Roof-Drains and other drainage equipment were also installed in this building.



Write for this booklet. It tells how "You Can Build It (Cubic Foot of Building Space) For Less A New Way".

J. A. ZURN MFG. CO. ERIE, PA., U. S. A.

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Sales Offices in All Principal Cities

Pre-eminent Manufacturer of Sanitary Products for the Protection of Human Health and Modern Structures

In Canada: Canadian Zurn Engineering Ltd., Montreal, P. Q.

J. A. ZURN MFG. CO., PLUMBING DIVISION, ERIE, PA., U. S. A.

Please send me the new Zurn Booklet, "You Can Build It (Cubic Foot of Building Space) For Less A New Way."

Name and Title.....

Company.....

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City and State.....

Please attach coupon to your business letterhead. Dept. A

Rest Rooms with Fixture-Bare Floors in These Buildings and Hundreds of Others:

OFFICE BUILDINGS: Farmers Mutual Insurance Company, Madison, Wis. • New Hampshire Fire Insurance Building, Manchester, New Hampshire • Southwestern Bell Telephone Co., Toll Building, Houston, Texas • International Business Machines, Endicott, N. Y. • General Food Building, Newark, N. J. • The Texas Company, Minneapolis, Minn. • Humble Oil Company, New Orleans, La. • **EDUCATIONAL BUILDINGS:** Fisher Memorial Dormitory, University of Notre Dame, Notre Dame, Ind. • Maple Heights High School, Maple Heights, O. • Dilworth School, Salt Lake City, Utah • New Engineering Laboratory, Virginia Polytechnic Institute, Blacksburg, Va. • Medical Research Building, University of Michigan, Ann Arbor, Mich. • **INDUSTRIAL BUILDINGS:** DeLaval Separator Company, Poughkeepsie, N. Y. • Houston Lighting and Power Company, Houston, Texas • Berkshire Knitting Mill, Andrews, N. C. • Minneapolis Honeywell Regulator Co.,

Minneapolis, Minn. • Chrysler Corporation, Trenton, Mich. • Dan River Mills, Philadelphia, Pa. • Court House and City Hall Building, Minneapolis, Minn. • Oregon State Penitentiary, Salem, Oregon • **HOSPITAL BUILDINGS:** Cuyahoga County Chronic Hospital, Warrensville, O. • National Jewish Hospital, Denver, Colo. • Terrell State Hospital, Terrell, Texas • Memorial Hospital, Algoma, Wis. • Central State Hospital, Petersburg, Va. • Oakwood Hospital, Dearborn, Mich. • **TERMINAL BUILDINGS:** New Norfolk and Western R. R. Warehouse, Roanoke, Va. • Holland American Line Terminal, Hoboken, N. Y. • New Greyhound Terminal, Phoenix, Ariz. • **MERCANTILE BUILDINGS:** Emporium, Oakland, Cal. • Sugarland Shopping Center, Sugarland, Texas • Federal Stores, Cleveland, O. • Macy's Kansas City Store, Kansas City, Kan. • Rexall Drug Company, National Headquarters Building, Los Angeles, Cal. •

Attention
Plumbers, Architects, Builders...
TWO PLACES
YOU CAN USE COPPER TODAY

1. For domestic hot and cold water lines, and process lines, government regulations still permit the use of Chase Copper Water Tube. Made in hard and soft temper, straight lengths and long coils, for solder-joint and flared fittings. Excellent for new installations or replacement work.

2. For underground installations exposed to corrosion and frost, use Chase Copper Water Tube, Type K. Soft temper copper tube can be bent around obstructions in the trench, each bend saves cost of fitting. 100 ft. lengths in coils are convenient to handle, require fewer fittings.

*Specify Chase Copper
Water Tube!*

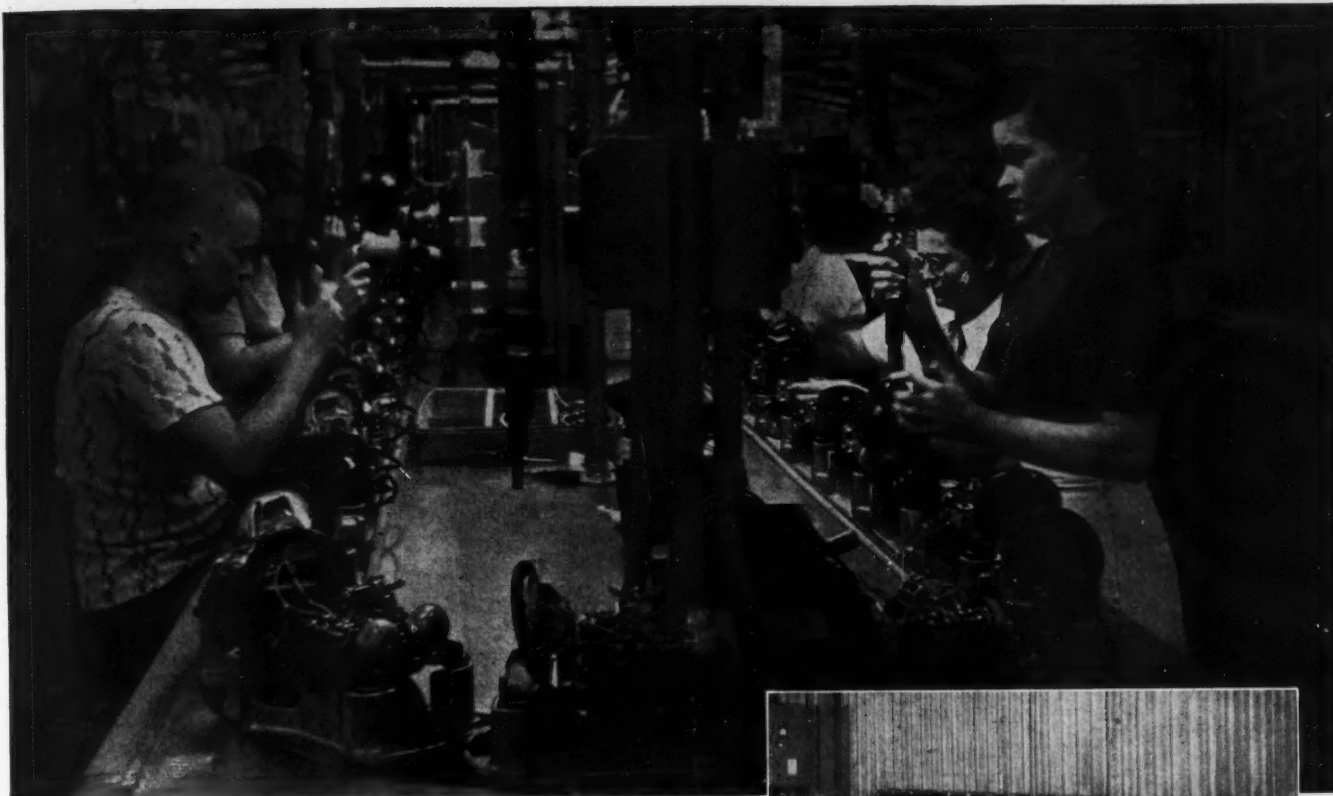
FOR an enduring and versatile piping, try Chase Copper Water Tube. It comes in straight lengths of 20 feet and in coils of 40, 60 and 100 feet. Smooth inside finish of tube and fittings offers no resistance to water pressure. Also add these features: rust-proof, corrosion resistant, readily bent and cut—and you have the perfect material for domestic water lines, process lines, and underground applications.

Chase  **BRASS & COPPER**

WATERBURY 20, CONNECTICUT • SUBSIDIARY OF KENNECOTT COPPER CORPORATION

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Atlanta	Dallas	Los Angeles	Philadelphia	Seattle
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Boston	Detroit	Minneapolis	Providence	(Sales office only)
Chicago	Houston†	Newark	Rochester†	
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Manufacturing telephone sets at Western Electric's new Indianapolis Plant.

Exide EMERGENCY LIGHTING helps protect new plant of WESTERN ELECTRIC

In this new plant, largest of its kind in the world, the Western Electric Company can produce annually more telephone sets than are currently in use in France or Canada. Architecturally, it embodies the latest advancements in industrial plant design. Every facility has been provided to assure economical production, provide comfort, and protection of plant, personnel and equipment. Among the emergency lighting safeguards used you'll naturally find Exide.

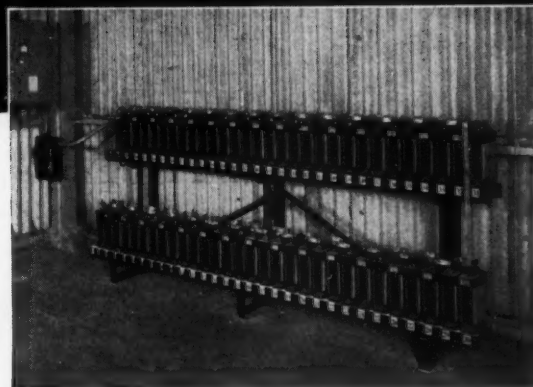
A number of sets are used for emergency lighting in both office and plant areas, including lights for exits, stairways, corridors and other essential locations. In addition, one set of Exide Batteries is used for switchgear operation in the boiler house controlling power circuits.

Specify Exide Emergency Lighting for the buildings you design—hospitals, schools, theaters, stores, factories, public buildings. There are units to fit any lighting need—from a few lights to many, for a single building or a large group.

THE ELECTRIC STORAGE BATTERY COMPANY
Philadelphia 2

Exide Batteries of Canada, Limited, Toronto

"Exide" Reg. Trade-mark U.S. Pat. Off.



Exide 60 DME-5 battery, one of seven used for emergency lighting.



Hospital reception room, one of the vital locations protected by Exide Emergency Lighting.

EXIDE LIGHTGUARD



Here's a portable, low cost unit that can be plugged into any A.C. lighting socket. When normal current is cut off, a built-in relay instantly and automatically turns on the powerful floodlight. After normal service is restored, the relay shuts off floodlight and turns on the charging current. The Exide battery is always fully charged ready for immediate action.

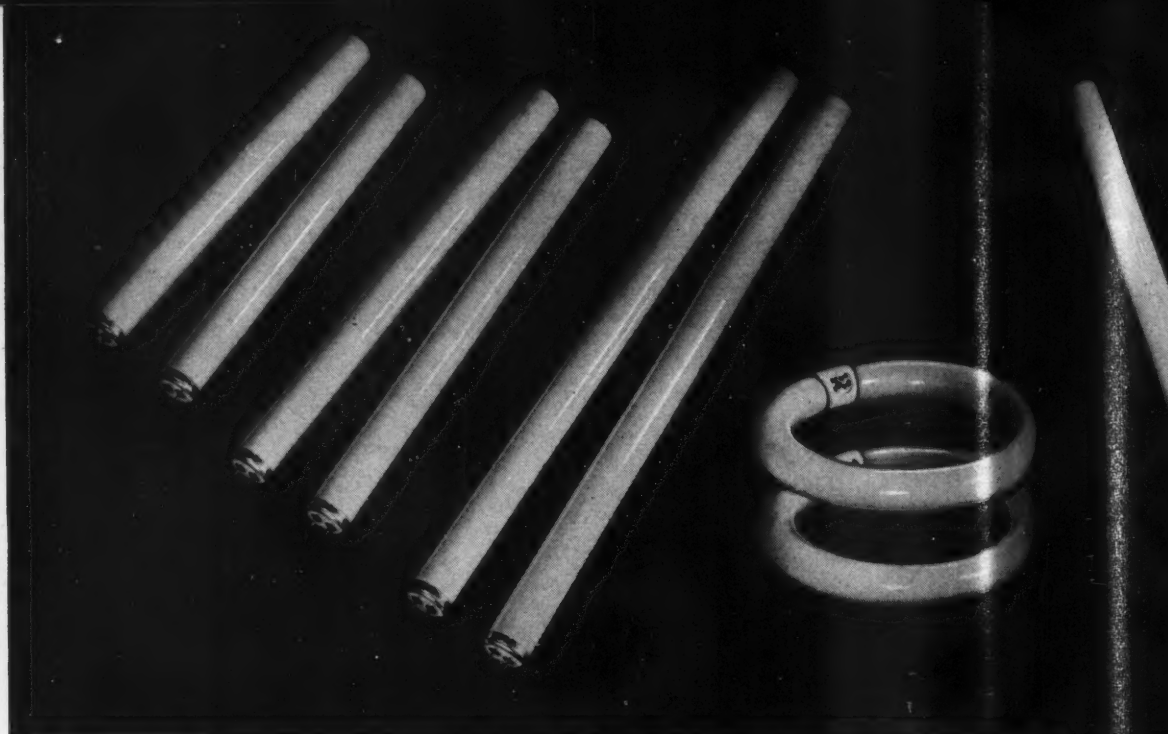
1888 — DEPENDABLE BATTERIES FOR 64 YEARS — 1952



G-E ballast No. 89G332 for 32-w Circline lamp.



NEW: Ballast 89G322 for 22-w Circline lamp.



JUST ONE G-E ballast (89G331) operates two 14, 15, or 20-w lamps, or two 22-w Circline lamps.

More fixture designs possible with

Now — make residential fixtures with all the above lamps and combinations — without using starters!

For the first time you can make fixtures using all of the above lamps and lamp combinations—*without using external starters*—with General Electric's expanded line of Trigger-Start Ballasts!

EXPAND YOUR MARKET

Your fluorescent fixtures will sell easier and faster because of the great customer appeal of G-E Trigger-Start Ballasts. They start lamps instantly without flickering, and they remove the bother of replacing worn-out starters. Moreover, these ballasts conserve lamp life because of their unique operation: electrodes are immediately pre-heated

at the flick of the switch, then starting current drops to practically zero when the lamp goes on—almost faster than the eye can see!

REDUCE STOCK PROBLEMS

Note that only five different G-E Trigger-Start Ballasts are needed to operate all of the above lamps and combinations. And, of course, there's no need to stock starters for trigger-start ballasts.

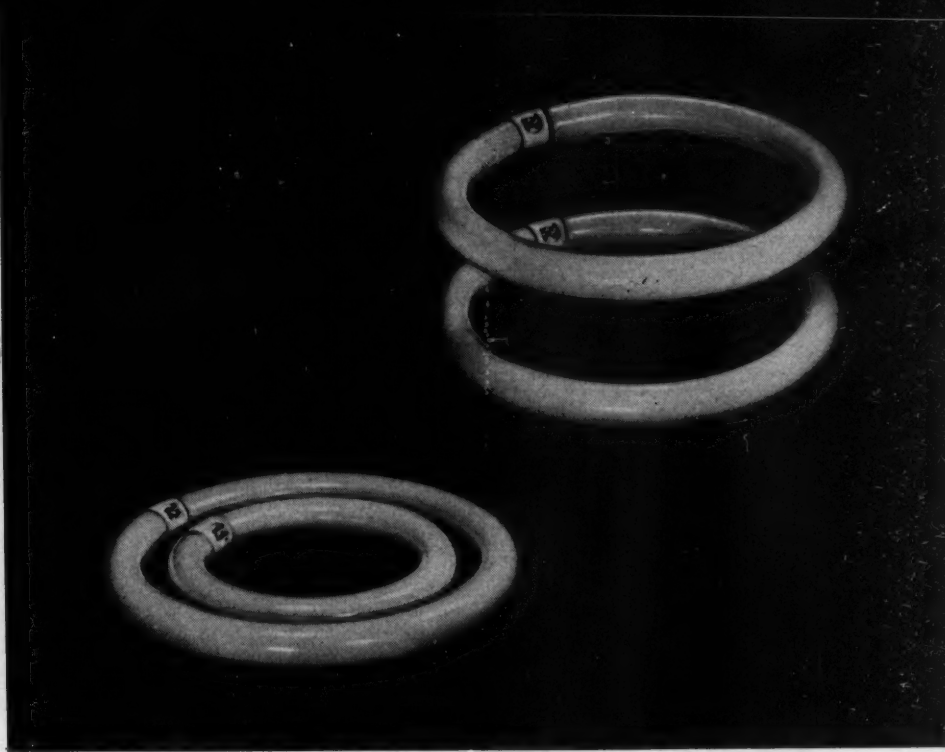
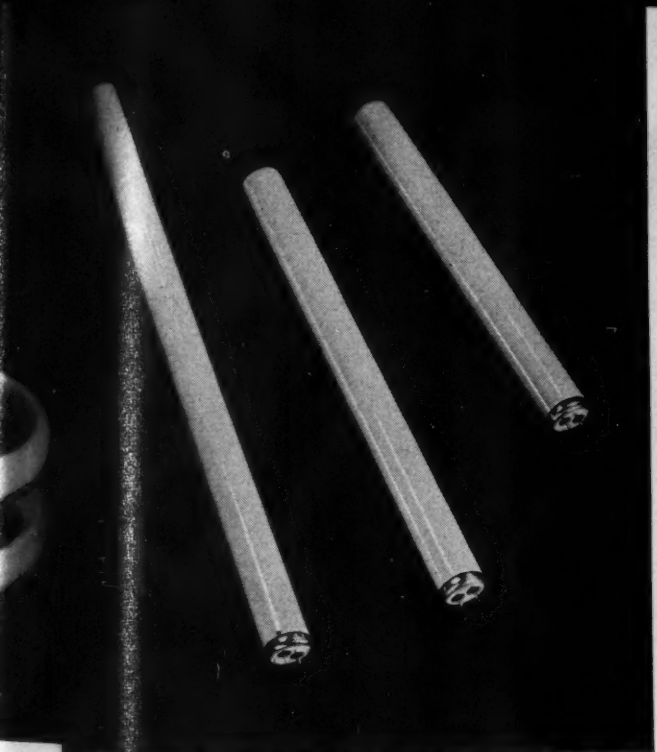
For more information on G-E Trigger-Start Ballasts contact your local G-E Sales Office, or write to *Section 412-98A, General Electric Co., Schenectady 5, New York.*

GENERAL  ELECTRIC

ONE

BETTER B
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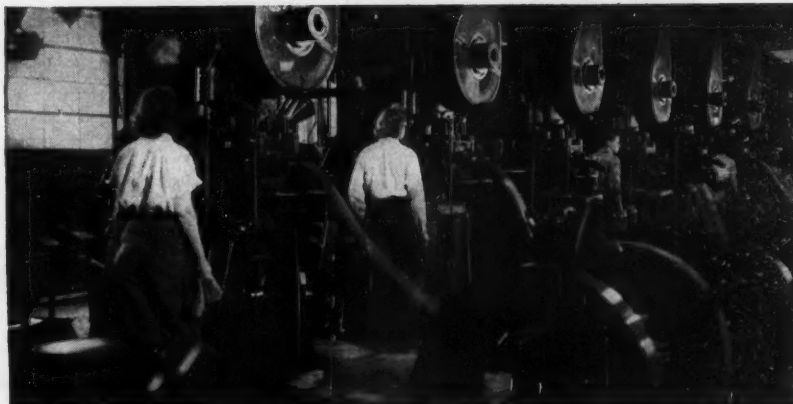


ONE G-E ballast (89G320) for 14, 15, or 20-w lamps. NEW: G-E ballast 89G333 for one 12-inch and one 8½-inch, or two 12-inch Circline lamps.

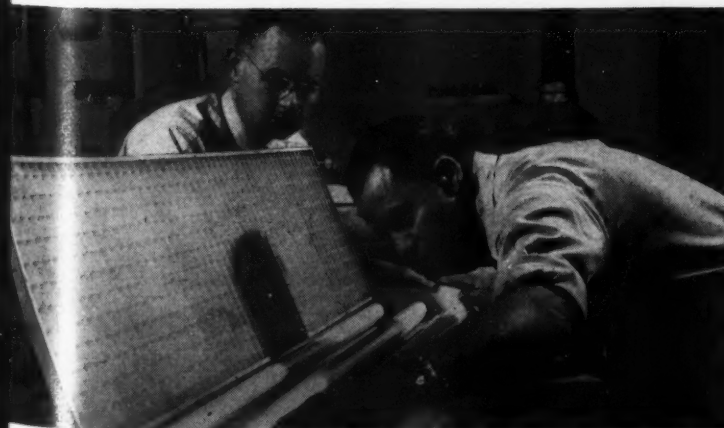
e with G-E Trigger-Start Ballasts



BETTER BALLASTS to help you build your fluorescent trade are continually being developed by General Electric—the world's largest producer of ballasts. Above, G-E engineers work out the design of a new type of ballast.



MORE BALLASTS AT LOWER COST are made possible by General Electric's standardization and mass-production methods. Above are automatic punch presses for cutting core laminations in G-E plant at Danville, Illinois.



TOP PERFORMANCE is the result of a continuing study by General Electric engineers of fixture manufacturers' problems and actual ballast operation.



YOUR ASSURANCE of a good ballast every time that you buy General Electric is this automatic ballast-testing apparatus on the production line.



ASK THE AEROFIN MAN

*For the Practical Answer to
Your Heat-Exchange Problem...*

There is a competent Aerofin heat-transfer engineer near you, qualified by intensive training and long experience to find the *right* answer to your own particular heat-exchange problem.

This specialized knowledge is there, ready for you to use to your greatest advantage. Ask the Aerofin man — and be right.

AEROFIN CORPORATION
410 South Geddes St., Syracuse 1, N. Y.

Aerofin is sold only by manufacturers of nationally advertised fan system apparatus. List on request.

Where the *other* services also count—it's always BAYLEY WINDOWS



Elementary School, Bexley, Ohio
Sims, Cornelius & Schooley, Archt., Columbus, Ohio
Altman Coady Company, Contr., Columbus, Ohio



Highlights of this New Popular BAYLEY Product

- Carries Quality Approved Seal of the Aluminum Window Mfrs. Ass'n. for materials, construction, strength of sections and air infiltration.
- Modern Appearance.
- Economical — Painting unnecessary.
- Permanent — Long carefree life.
- Simplicity — No complicated mechanism.
- Adaptable to all types of construction.
- Glazing outside — flat surface inside.
- Extra deep sections — Accommodate "Thermopane" or "Twindow" glazing.
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- Prepared for screens.
- Permits use of accessories, such as draperies, shades, curtains, venetian blinds or awnings.
- Positive acting hardware of white bronze.

73 Years of
RELIABILITY



Bayley Aluminum Projected Window

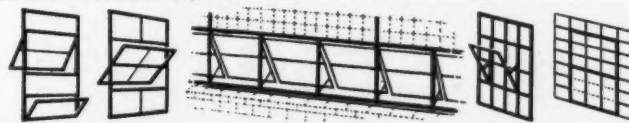
Offers New Features for Modern Schools of All Types

The first essential to a truly satisfactory relationship is a fine quality product. But much more is also required. Full appreciation of this fact is the bedrock of Bayley's policy — and is the reason discriminating designers from coast to coast have so highly favored Bayley for so many years.

Bayley's determination to better serve through all the building stages — from the building's inception to its occupancy — is again exemplified in the Bayley Aluminum Projected Window. It represents the culmination of years of conscientious endeavor. First to fully recognize the universal advantages of the projected window, Bayley refined its desirable features in the most enduring construction material developed through long research by the Aluminum Industry. The result is an ideal window for schools, hospitals, institutional and commercial buildings — but equally suited for private living units — that reflects Bayley's years of specialized window experience.

Regardless of window requirements, you too will find *extra values* in discussing your needs with Bayley. Write or phone.

See Bayley in Sweet's. Complete catalogs on aluminum windows, 17a/BA; steel windows, 17b/BAL; Saf-T-Gard Hospital Detention Window, 17b/BAY.



THE WILLIAM BAYLEY COMPANY

Springfield, Ohio

District Sales Offices:

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Washington 16



*"there's an idea here
for your next job!"*

The idea is Mosaic Tile . . . a beautiful and exceptionally versatile material which dramatizes walls and floors. Study the photograph on the opposite page, then visualize the practical and decorative appeal of Mosaic Tile on walls and floors of your present and future projects!

When you build or remodel, give Mosaic Tile prime consideration. For quick facts, consult your nearest Mosaic office. For helpful literature on the many types of Mosaic Tile, including the new Formfree lines, write Department 30-9, The Mosaic Tile Company, Zanesville, Ohio.

See our catalog in Sweets'

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Phone: Fillmore 3717

Salt Lake City 8, Utah
560 Gale Street
Phone: 9-8285



Photograph by Ezra Stoller

Specifications: Wall—1"x1" Faience Mosaics special pattern No. S-34 in new building at Philadelphia Zoo. Harbeson, Hough, Livingston & Larson, Architects. Wm. Watts & Co., Tile Contractor—both of Philadelphia.

THE MOSAIC TILE COMPANY

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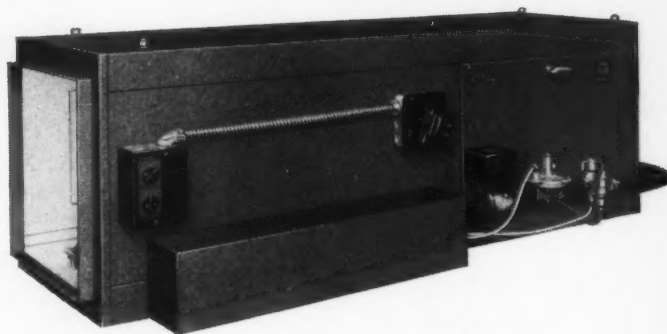
(Member—Tile Council of America)

Offices, Showrooms and Warehouses Across the Nation
Over 4000 Tile Contractors to serve you

Here's a new gas-fired horizontal-type heating unit designed to save floor space...



The PAWNEE Winter Air Conditioner



● The new horizontal Pawnee winter air conditioner saves valuable floor space in one-story houses. It can be installed in an attic, suspended under the floor in crawl space, or overhead in a hallway, closet, utility room or similar out of the way place.

In an attic installation the Pawnee may be used as a ventilator to circulate cooler air in summer. No change is necessary, other than a simple by-pass to discharge the air drawn from the living zone into the attic space where it will flow outside.

Installed in the crawl space under a basementless house, the Pawnee allows complete freedom of duct layout . . . any type of system may be used. The warm air registers may be located on either inside or outside walls. This horizontal unit can be easily installed in perimeter heating jobs, too.

The compact Pawnee winter air conditioner is made in four sizes and burns manufactured, natural, mixed and liquefied petroleum gas. With its smart Forge Red jacket and trim lines, the Pawnee makes a neat, attractive installation. **American Radiator & Standard Sanitary Corporation**, P. O. Box 1226, Pittsburgh 30, Pennsylvania.



AMERICAN-Standard

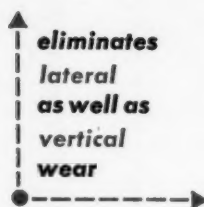
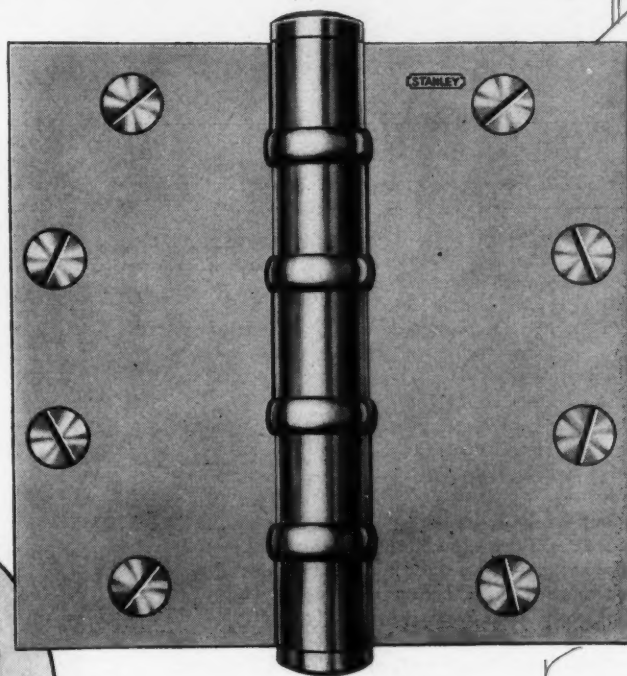
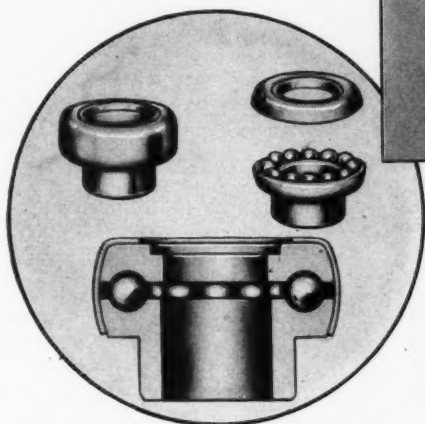
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a hinge that **WON'T** wear out

Stanley Full-Jeweled Ball Bearing Butt Hinge*



Here's a hinge you can specify for heavy doors, exterior doors, and doors receiving high frequency service — with complete confidence that it will last as long as the building.

The ball bearing construction of the Stanley Full-Jeweled* Hinge is designed to take lateral as well as vertical wear. With the load supported both ways on ball bearings, it is practically impossible to wear out this hinge.

Whenever there are heavy or busy doors in any building you design, you will insure your client's investment by specifying Stanley Full-Jeweled Extra Heavy Ball Bearing Butt Hinges†.

† All Stanley Extra Heavy Ball Bearing Hinges are equipped with Full-Jeweled Bearings.

Exclusive Full-Jeweled Ball Bearing assembly consists of a movable and fixed raceway. When lateral thrust occurs, the movable raceway transmits the force directly to the bearings, which, in turn are held firmly by the fixed raceway. Thus, the weight of the door is supported both laterally and vertically on ball bearings.

THE STANLEY WORKS • NEW BRITAIN, CONNECTICUT

STANLEY

Reg. U.S. Pat. Off.
HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

*Reg. U. S. Pat. Off.

The most famous doors in the world swing on Stanley Hinges

**In 9 dormitories
and fraternity
houses on the new**



ARCHITECTS:

Perry, Shaw, Hepburn, Kehoe &
Dean . . . Boston

GENERAL CONTRACTOR:

Gilbane Building Co. . . . Providence

ARCHITECTURAL MILLWORK:

L. Vaughn Co. . . . Providence

BROWN UNIVERSITY QUADRANGLE

Atlas Panels and Atlas Doors were used

The wall panels were $\frac{3}{4}$ " hardwood plywood—of several different woods, principally Gum and Birch, according to the design of each room and each particular application.

Interesting features of the dormitory rooms (right) are the cabinets, bureaus, closets, shelving, shoe racks, etc.—all built in after the wall panels were finished. The sections were precut, tongue-and-grooved, edge-stripped.

The Atlas Doors are solid core hardwood flush doors—some $1\frac{3}{8}$ " thick, some $1\frac{3}{4}$ " thick. The core material of these solid core doors is Balsa Wood—inert, proof against stress and warpage. Balsa also has important sound-deadening qualities and provides efficient insulation.

The core pieces are glued together to form a solid mass, then positioned within a kiln-dried frame.

Atlas Plywood Panels are available in every important hard and soft wood, domestic or imported. Atlas Flush Doors—both solid core and hollow core—have exclusive structural features which mean lasting beauty and lasting strength.

Architects, contractors, mill workers and builders specify and use Atlas Panels and Atlas Doors . . . They know that from standing tree to finished product, every panel and every door has been produced under one ownership, one standard of inspection and control, one responsibility. Also that every Atlas Product is exactly as graded or better.

We'd like you to know more about Atlas Panels and Atlas Flush Doors. For illustrated literature, kindly address your request to Department 80.



ATLAS PANELS



ATLAS DOORS

18 MANUFACTURING PLANTS

Anderson, Cal.	Gladstone, Mich.
Crescent City, Cal.	Munising, Mich.
Laurel, Del.	Goldsboro, N. C. (2)
Brunswick, Ga.	Plymouth, N. C.
Houlton, Me.	Klamath Falls, Ore. (2)
Greenville, Me.	Portland, Ore.
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PANEL AND DOOR DIVISION

ATLAS

PLYWOOD CORPORATION

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STATLER BUILDING, BOSTON 16, MASS. • Telephone: Hancock 6-0016 • Teletype: BS-644

To get efficient fluorescent lighting ...insist on *This Shield* on your ballast



There's more to satisfactory fluorescent lighting than lamps and a reflector. There's always a ballast in the fixture . . . and the way it performs determines whether you'll get *full lamp life, rated light output* and *satisfactory performance*.

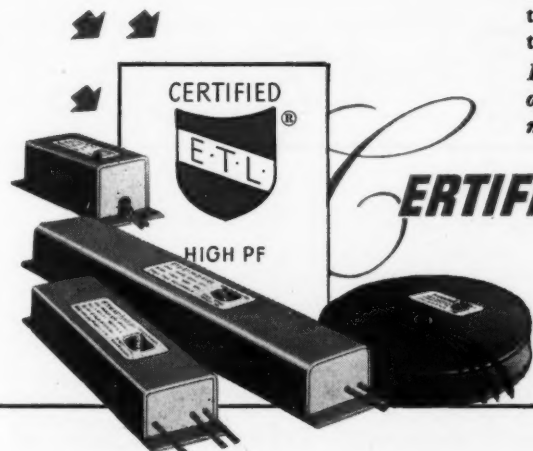
Only CERTIFIED BALLASTS carry the shield that assures best lighting.

That's because CERTIFIED BALLASTS are made to precise specifications, then tested by Electrical Testing Laboratories, Inc., which certifies they conform to these high standards.

There's no excuse for inefficient, unsatisfactory fluorescent lighting when CERTIFIED BALLASTS are available.

Be sure every fixture you get has CERTIFIED BALLASTS . . . the ones with the shield.

● Complete information on the types of CERTIFIED BALLASTS available from each participating manufacturer may be obtained from Electrical Testing Laboratories, Inc., East End Ave. at 79th St., New York, N. Y. Participation in the CERTIFIED BALLAST program is open to any manufacturer who complies with the requirements of CERTIFIED BALLAST MANUFACTURERS.



CERTIFIED BALLAST MANUFACTURERS

Makers of Certified Ballasts for Fluorescent Lighting

2116 KEITH BLDG., CLEVELAND 15, OHIO

Architecturally Alive. Structurally Sound

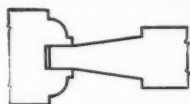


The "Picture Door"

A welcome relief from flat monotony . . . delighting the eye with balanced lines, clean hi-lites, deepsoft shadows. Here is the door of depth . . . the third dimension, to inspire the Architect, to brighten the Dealer's line, to help the Builder close the sale. Write today for full details on Morgan Tri-Panel, the Door of Dimension . . . of today . . . of tomorrow.



TRI-PANEL blends with every architectural trend



M-117 EXTERIOR DOOR
Thickness: $1\frac{3}{4}$ " with $1\frac{1}{8}$ " hip-raised panels, true ovolo sticking, smoothly sanded overall.



M-1073 INTERIOR DOOR
Shown at left. Thickness $1\frac{1}{8}$ " with $\frac{3}{4}$ " hip-raised panels. Both doors in Standard Sizes.

TRI-PANEL

Tri-Panel relieves the wall-like flatness and makes the entrance to a room or a house the focal point, with a changing picture of correctly proportioned, sharply defined panels, ever changing with the source of light and the viewer's angle. Tri-Panel is the "Picture Door."

MORGAN COMPANY • Oshkosh, Wisconsin

A great name in woodwork for 97 years • Doors • Entrances • Stairwork
Mantels • Corner Cases • Kitchen Cabinets • Morganwalls • Sash • Trim





New! 4 closet combinations by RICHMOND

The actual appearance and features of these 4 new closet combinations are your best reasons for specifying and installing them. Their addition to the Richmond line of plumbing fixtures now makes it even more modern, even more complete than ever before.

Whether it's a vitreous china closet combination, lavatory, urinal or an enameled cast iron bathtub, lavatory, sink in "whiter white" or pastel colors, you'll find Richmond offers the widest possible selection in size and style, the finest quality in design, engineering, and manufacturing skill.



PLYMOUTH G-212-14" Close-coupled reverse trap. Round-front bowl, self-draining jet. Tank with fittings and shelf-type cover.

LARCHMONT G-206-12" Close-coupled syphon jet, round-front bowl. Tank with adjustable float valve, brass tank fittings, chrome operating lever and shelf-type cover.

KENT G-218-14" Close-coupled, washdown. Round-front bowl, self-draining jet. Tank with fittings and shelf-type cover.

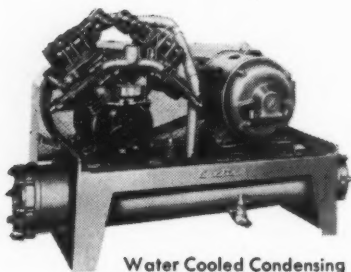
CORTLAND G-213-12" Close-coupled reverse trap. Elongated bowl, self-draining jet. Tank with fittings and shelf-type cover.

See your wholesaler or Mail Coupon Today.

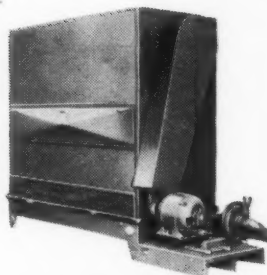
Richmond Radiator Company 19 East 47th Street, New York 17, N. Y.		AR/6
Please send me more information and literature on:		
<input type="checkbox"/> G-206-12"	<input type="checkbox"/> G-212-14"	
<input type="checkbox"/> G-213-12"	<input type="checkbox"/> G-218-14"	
No obligation, of course.		
NAME.....		
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CITY.....ZONE.....STATE.....		
We are <input type="checkbox"/> plumbing wholesalers <input type="checkbox"/> plumbing contractors <input type="checkbox"/> building contractors.		

BUILD YOUR **AIR CONDITIONING** SPECIFICATIONS
AROUND

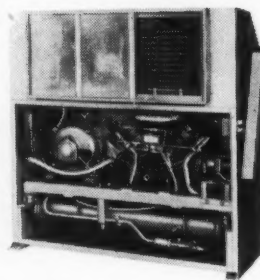
Curtis



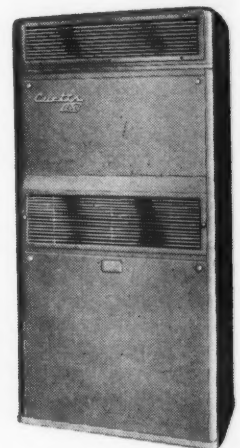
Water Cooled Condensing
Units—through 40 tons



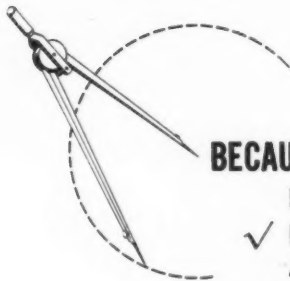
Evaporative condensers—
cooling towers — and air
handling units to match



Central Type—10-15 Ton
Air Conditioning



2, 4, 6, 8 Ton—
Packaged Type
Air Conditioning



BECAUSE... Curtis equipment has an *earned* reputation for performance.

- ✓ Built by a company with over 98 Years of Successful Manufacturing Experience.
- ✓ Competitively priced.
- ✓ Operate economically.
- ✓ Easily serviced.
- ✓ Engineering help is provided (if needed) by Curtis Engineers.
- ✓ New additions to the Curtis line provide the correct size and type for any installation.
- ✓ A new 1952 Curtis Architects Manual will be sent upon request to licensed architects. Use your own letterhead, please.

Curtis REFRIGERATING MACHINE DIVISION

of Curtis Manufacturing Company

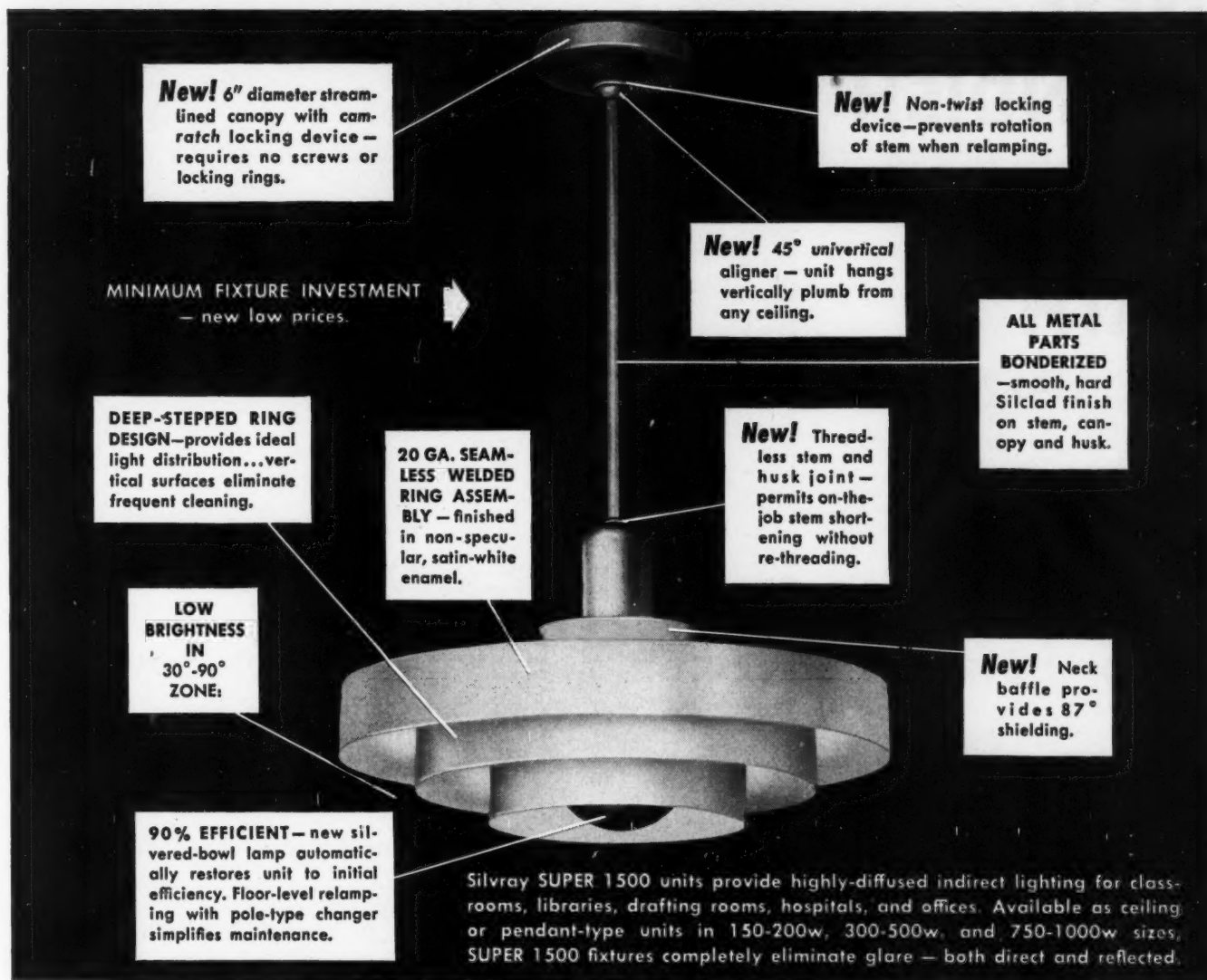
1986 Kienlen Avenue, St. Louis 20, Missouri

98 Years of Successful Manufacturing

COMPARE!

No other indirect, incandescent fixture offers ALL these features . . .

SILVRAY'S improved SUPER 1500 UNIT



New! 6" diameter stream-lined canopy with cam-match locking device — requires no screws or locking rings.

New! Non-twist locking device — prevents rotation of stem when relamping.

New! 45° univertical aligner — unit hangs vertically plumb from any ceiling.

ALL METAL PARTS BONDERIZED — smooth, hard Silclad finish on stem, canopy and husk.

New! Thread-less stem and husk joint — permits on-the-job stem shortening without re-threading.

20 GA. SEAM-LESS WELDED RING ASSEMBLY — finished in non-specular, satin-white enamel.

DEEP-STEPPED RING DESIGN — provides ideal light distribution...vertical surfaces eliminate frequent cleaning.

LOW BRIGHTNESS IN 30°-90° ZONE:

90% EFFICIENT — new silvered-bowl lamp automatically restores unit to initial efficiency. Floor-level relamping with pole-type changer simplifies maintenance.

MINIMUM FIXTURE INVESTMENT — new low prices.

Silvray SUPER 1500 units provide highly-diffused indirect lighting for classrooms, libraries, drafting rooms, hospitals, and offices. Available as ceiling or pendant-type units in 150-200w, 300-500w, and 750-1000w sizes. SUPER 1500 fixtures completely eliminate glare — both direct and reflected.

Get complete details, mail this coupon today!



Smoot-Holman, Inc. of Inglewood, Cal. — west coast licensee.

SILVRAY Lighting, Inc., 102 West Main St., Bound Brook, N. J.

Gentlemen:

Please send me further information on the Silvray SUPER 1500 unit.

Name _____

Firm _____ Title _____

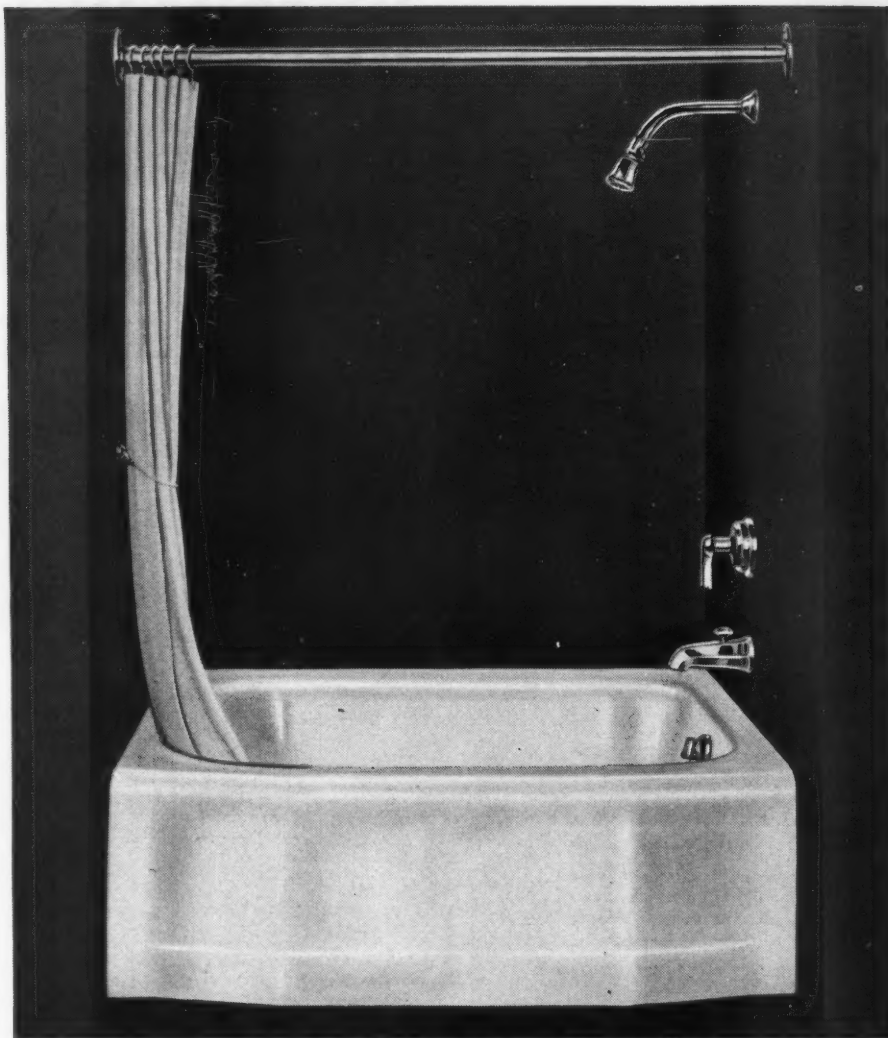
Address _____

City _____ Zone _____ State _____

All concentric-ring fixtures for use with silvered-bowl lamps are covered by U.S. Pat. #2,303,747 owned by Silvray Lighting, Inc.

NEW STANDISH SHOWER BATH

42" x 36"



Kohler Standish enameled iron recess shower bath, K-306-F.

for homes, apartments, hotels, motor courts



Here is a space-conserving bath, practical for the needs of an entire family. Wider than the average bath, with flat bottom, it is roomy for showering and suitable for adult tub bathing. The low front makes it especially useful as a child's bath.

The Standish is 42" long, 36" wide at the center, 34" wide at the ends, 14" high. Standing area at the bottom is approximately 35" x 26". The bench rim is 5" wide.

The Standish matches the popular Kohler Cosmopolitan. The lustrous enamel is fused to non-flexing iron cast for strength and rigidity. The combination fitting with Niedecken Mixer is chromium-plated, affords easy control of water temperature.

Kohler Co., Kohler, Wisconsin. Established 1873

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS



Here is the *new look* in ceilings. It is achieved with *Sea Swirl* decorative plywood, made from superior grades of Douglas fir plywood. This three dimension plywood is beautiful, practical and versatile.

Interior and exterior types are available in 4' x 8' size, 5/16" thickness (other sizes on special order). Uses are unlimited in remodeling or new construction: for ceilings, walls, built-ins, furniture...*Sea Swirl* is available at APMI sales warehouses. Contact the one nearest you or write for illustrated booklet.



Producers of Sea Swirl; Douglas fir plywood; mahogany faced plywood; Plyron; Handy Panels.

Associated Plywood Mills, Inc.

GENERAL OFFICES: EUGENE, OREGON
MILLS AT EUGENE AND WILLAMINA, OREGON

SALES WAREHOUSES: 4268 Utah Street, St. Louis, Mo.; 4814 Bengal Street, Dallas, Texas; 4003 Coyle Street, Houston, Texas; 1026 Jay Street, Charlotte, N. C.; 111 Welborn Street, Greenville, S. C.; 925 Toland Street, San Francisco, Calif.; Eugene, Oregon.

SALES OFFICES: 31 State Street, Boston, Mass.; 1854 Brae Burn Road, Altadena, California.



EXIT

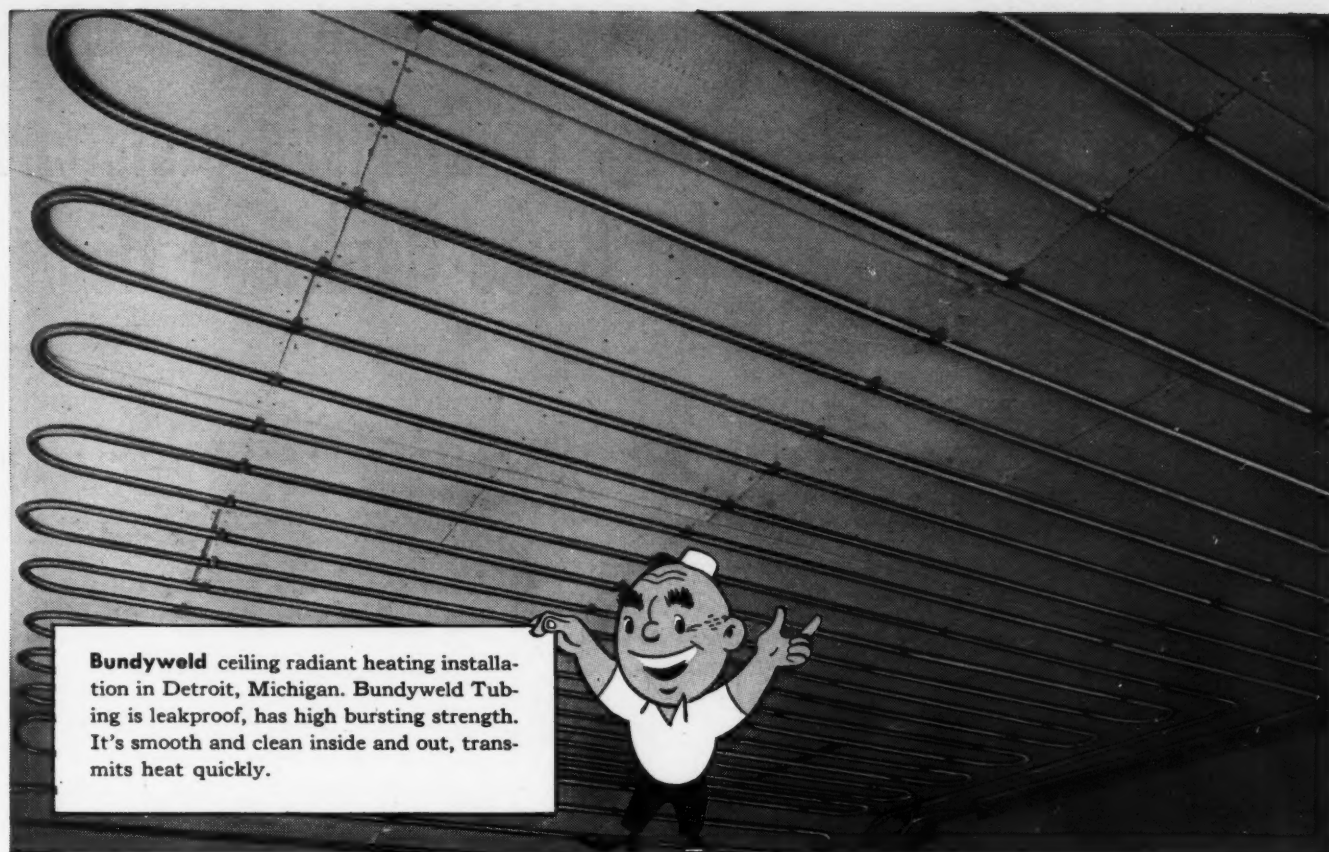
Holabird & Root & Burgee, Architects

MODERN DOOR CONTROL BY *LCN* • CLOSERS* CONCEALED IN DOOR

THE NORTHERN TRUST COMPANY, CHICAGO, ILLINOIS

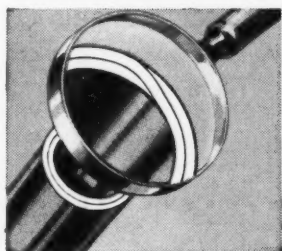
**In this coupon booth installation the closer action has been reversed to OPEN the doors for box holders.*

LCN CATALOG 11-E ON REQUEST OR SEE SWEET'S • LCN CLOSERS, INC., PRINCETON, ILLINOIS



Bundyweld ceiling radiant heating installation in Detroit, Michigan. Bundyweld Tubing is leakproof, has high bursting strength. It's smooth and clean inside and out, transmits heat quickly.

Give your houses the new competitive edge of Bundyweld ceiling radiant heating



Key to Low Cost

Bundyweld is the only tubing double-walled from a single strip. It's steel, copper-coated inside and out. It gives finest radiant heating performance, with savings up to 50% on material costs and installation time.

Standard 20' or 24' lengths of Bundyweld are easily formed into coils in shop or on job site. Expanded ends (furnished when specified) are quickly soldered into leakproof union. Joined, lightweight coils are easily mounted onto ceiling, quickly plastered over.

Put your houses years ahead with today's fastest-growing, most advanced heating method.

Thousands of home owners living with Bundyweld ceiling radiant heating will hear of nothing else. They're sold on its unique comfort, convenience, economy, freedom from dirt.

Thousands who read Bundy's ads in *Better Homes & Gardens* and *Amer-*

ican Home send in coupons for literature, write in for names of builders and architects handling Bundyweld ceiling radiant heating. Many of these people are ready prospects for you.

Take advantage of this ready-made, rapidly expanding market. Move out ahead of your competition. Send coupon for details on Bundyweld ceiling radiant heating and on Bundyweld Tubing.

Radiant Heating Division

BUNDY TUBING COMPANY
Detroit 14, Michigan

**SEND FOR
FREE LITERATURE!**



Bundyweld
ceiling radiant heating

Radiant Heating Division, Dept. AR-752
Bundy Tubing Company, Detroit 14, Michigan

- ☐ Send me free 20-page nontechnical brochure explaining Bundyweld ceiling radiant heating clearly and fully.
- ☐ Send me Bundy technical radiant heating pamphlet.

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

What brand do you
prefer to specify
or recommend?
75% SAID "BRUCE"

What brand do
most of your clients
prefer?
87% SAID "BRUCE"

Survey among architects shows tremendous preference for Bruce Hardwood Floors



Nation-wide survey made by a leading national architectural magazine

There are over 200 different brands of hardwood flooring manufactured in the United States. So, when an independent survey among 5000 architects shows a 75% preference for one brand over all others, that really means something. They voted Bruce Hardwood Floors a 14.6 to 1 favorite over the next leading brand! To make it even better, 87% of these architects said their clients preferred Bruce over all other brands.

Write for color literature and complete data on preferred Bruce Hardwood Floors.

E. L. BRUCE CO., MEMPHIS 1, TENN.
*World's Largest Maker of
Hardwood Floors*

Architects say they prefer Bruce Floors for these 6 principal reasons

- Quality manufacture and grading
- Familiarity with product
- Satisfactory experience
- Variety of types
- Factory finish
- Ease of installation

BRUCE HARDWOOD FLOORS



BLOCK, STRIP, PLANK

"Shoppers' World", Framingham, Mass., is a double-decked Main Street, with store frontage equal to ten city blocks. The building group is a giant showcase surrounding a landscaped mall. More than thirty individual stores are identified by PLEXIGLAS signs. Architects: Ketchum, Gina & Sharp.



Three-fourths of the Stores at "Shoppers' World" Use **PLEXIGLAS Signs**

Signs made of PLEXIGLAS identify thirty-three of forty-four stores at this noted shopping center. Customers are attracted by the glare-free, legible, acrylic plastic faces and letters. The pleasing appearance and selling effectiveness of the signs are in keeping with the efficient merchandising design of "Shoppers' World".

Used as a sign material, PLEXIGLAS provides unlimited design possibilities. Broad-stroked letters, large-area backgrounds, three-dimensional trademark reproductions, colorful store facades—PLEXIGLAS makes them distinct and distinctive, day and night. Evenly diffused backlighting, from sources concealed and protected by the translucent plastic, makes a sign completely luminous at night, as attractive and easy to read as in daytime. Signs made of this *outdoor* plastic give long service with low maintenance costs.

You should have full information on PLEXIGLAS signs. We'll be glad to send it to you.

CHEMICALS



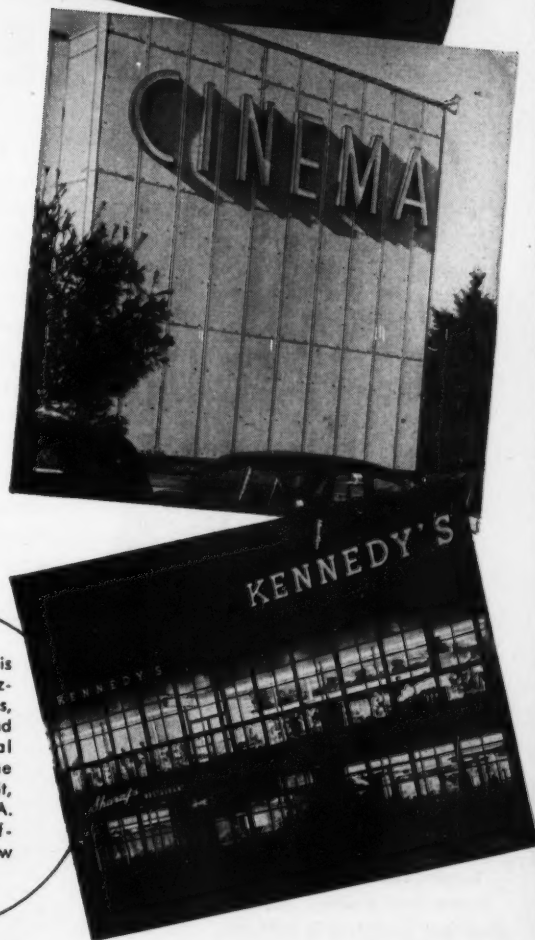
FOR INDUSTRY

**ROHM & HAAS
COMPANY**

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

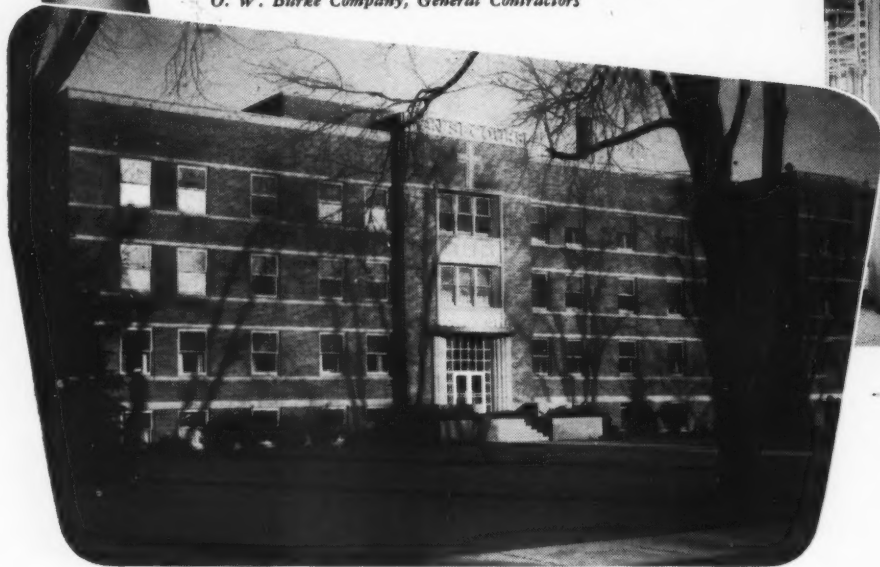
See how PLEXIGLAS is used for lighting, glazing, shower enclosures, dome skylights, and other architectural applications... at the Rohm & Haas exhibit, Booth No. 3, A.I.A. meeting, Waldorf-Astoria Hotel, New York, June 23-27.



Canadian Distributor: Crystal Glass & Plastics, Ltd., 130 Queen's Quay at Jarvis Street, Toronto, Ontario, Canada

PLEXIGLAS is a trademark, Reg. U. S. Pat. Off. and other principal countries in the Western Hemisphere.

Bon Secours Hospital, Grosse Pointe, Michigan
 Charles Sullivan Association, Architects
 Snyder & McLean, Engineers
 Hydon-Brand Electric Company, Electrical Contractors
 O. W. Burke Company, General Contractors



For all types of circuits in all types of construction, ELECTRUNITE E.M.T. provides maximum protection, helps keep construction on schedule.

**Hospital Service that is Ever Ready...
 relies on protective**

ELECTRUNITE E.M.T.

● Lighting and communications circuits in this new hospital are steel-protected from fire, moisture, and mechanical damage by Republic ELECTRUNITE E.M.T. (Electrical Metallic Tubing).

This light-and-strong steel raceway is easily installed in all types of buildings... for new jobs or relocation of facilities in older buildings. It is inspected by Underwriter's Laboratories and approved by the National Electrical code for concealed, exposed, and concrete installations.

Exclusive "Inch-marked®" lengths and uniform ductility help electricians make smooth, accurate bends. Exclusive inside knurling greatly reduces the job of pulling wires. Compression fittings eliminate threading and permit tight assembly without turning the whole run.

★ ★ ★

Where *extra-severe* corrosion is encountered, consider ELECTRUNITE "Dekorion-Coated" E.M.T. . . . the plastic-armored raceway that is tougher even than severest chemical atmospheres.

REPUBLIC STEEL CORPORATION
 STEEL AND TUBES DIVISION
 224 EAST 131st ST. • CLEVELAND 8, OHIO

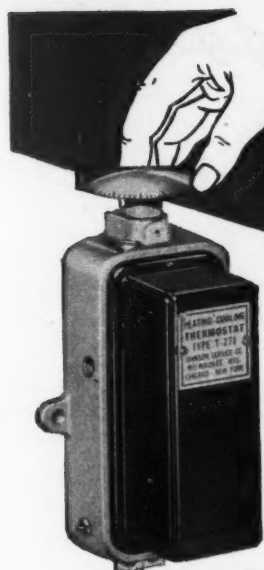
SEE SWEET'S FILE

or write us for detailed information on these Republic Steel Building Products:

Pipe—Sheets—Roofing
 Enduro Stainless Steel
 Toncan Enameling Iron
 Electrunite E.M.T.
 Fretz-Moon Rigid Steel Conduit
 Taylor Roofing Ternes
 Berger Lockers, Bins, Shelving
 Berger Cabinets for Kitchens
 Truscon Steel Windows, Doors,
 Joists and other Building Products



ELECTRUNITE... THE ORIGINAL ELECTRICAL METALLIC TUBING



Johnson T-271 Heating-Cooling Thermostat for air conditioning units.

The chances are...

a building like
525 William Penn Place
would be equipped with

Johnson CONTROL



An office in the 525 William Penn Place building, Pittsburgh, Pennsylvania.

Harrison & Abramovitz, New York, and William Y. Cocken, Pittsburgh, architects; Dravo Corp., Pittsburgh, heating & air-conditioning contractors.

In building after building, Johnson is called upon to furnish and install dependable automatic temperature and humidity control for modern air conditioning systems. No matter what the extent of the problems involved, the chances are that they will be turned over to the nation-wide Johnson organization.

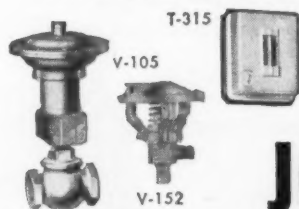
In Pittsburgh's newest skyscraper, 1,650 year-around air conditioning units provide all-weather comfort in each exterior room. A Johnson T-271 Heating-Cooling Thermostat is located in one of the units in each room, with its temperature bulb mounted close behind the recirculating air grille to respond quickly to the average temperature of the air entering the units. Thus, the Johnson V-152 valve, on the hot and cold water supply to the coil in each unit, is operated to determine automatically the heating or cooling effect to be applied.

The interior areas in the building are served by 51

central-type air conditioning systems, and 105 Johnson T-315 Submaster Room Thermostats control Johnson V-105 coil valves on the steam supply to booster heaters.

In addition to the *Individual Room* control, there is comprehensive Johnson Master Control, "behind the scenes", to regulate temperatures and humidities for the 10 systems which supply primary air to the units, as well as the conditioned air delivered by the 51 central systems which serve the booster heaters in the interior sections.

Yes! **THE CHANCES ARE** that a Johnson engineer from a nearby branch office has the answer to complex temperature control problems such as those encountered at 525 William Penn Place. He is equally conversant with smaller problems, too. A talk with him entails no obligation. Ask him to call on you, any time. **JOHNSON SERVICE COMPANY**, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.



Automatic Temperature and
JOHNSON *Air Conditioning* **CONTROL**
MANUFACTURE • APPLICATION • INSTALLATION • SINCE 1885

PORTRAIT OF

Preparedness



Tinnerman Products, Inc., Cleveland, Ohio
Architects: McGeorge-Hargett & Associates
Builders: The Sam W. Emerson Co.

The new home of SPEED NUT fasteners is a combination of practical planning and architectural artistry, a design-for-efficiency, the last word in modern production and management facilities. But its keynote is an obvious *preparedness* to meet the challenges and opportunities presented by changing economic conditions.

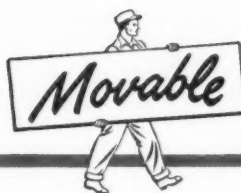


The new Tinnerman building is designed for *flexibility*. Most of its interior space, for offices and factory enclosures, is subdivided by Mills Movable Metal Walls. Pictured at the left is a typical executive office equipped with metal and glass partitions.

Mills Movable Metal Walls are solid, attractive, insulated and sound-proofed. Easily erected, they require practically no maintenance and can be moved—*quickly, conveniently and at very low cost*—to fit any new layout or change in space requirements. Changes can usually be made overnight or during a weekend, without interrupting normal business routine.

This maximum mobility with minimum labor is the result of the *demonstrably superior quality* of Mills Movable Metal Walls, developed through more than 30 years of accepting complete responsibility for their design, construction and installation.

MILLS



METAL WALLS

Those who look to you for the answers to their space problems will never be the victims of "frozen space"—an obstacle to *preparedness*—if you equip their buildings with Mills Movable Metal Walls. Write for Mills Catalog No. 51. We will be happy to give you further information upon request.

THE MILLS COMPANY • 954 WAYSIDE ROAD • CLEVELAND 10, OHIO



New Drayton Arms Apartment uses Westinghouse Bus Duct throughout



BUS DUCT IS FLEXIBLE

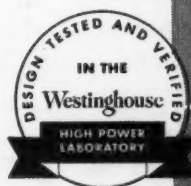
Two, 1350-ampere, low-impedance bus duct risers carry power conveniently from basement to penthouse in this ultramodern, 198-suite apartment in Savannah, Georgia. Each riser is three phase, 4 wire and feeds half a floor at each level. Power take-offs are through circuit protective devices built into the duct.

Standardized duct sections co-ordinated perfectly with building plans, were quickly and easily installed. The contractor and owner are so pleased with the results that the contractor has selected and ordered similar Westinghouse Bus Duct for the new, 15-story Savannah Bank and Trust Building.

Check the four types of Westinghouse Bus Duct when planning power expansions or new jobs. Up to 5000 amperes it gives more power per pound of equipment than any other means of secondary power distribution. Types are available to handle all load conditions and service requirements.

Call your Westinghouse distributor for complete details or write for B-4272-A. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania.

J-30106



YOU CAN BE SURE...IF IT'S
Westinghouse

BUS DUCT



CRANE

chore-center kitchen



An unusual idea combining facilities in one work-saving room

The basic idea here is simply this: A kitchen today can be a step-saver where a housewife can do all her chores—sew, wash, and iron as well as store food and prepare meals.

This Chore-Center kitchen is one of forty-eight rooms in the new Crane "Sketchbook of Ideas," one of the key features of Crane's new service to architects who specialize in designing homes. You can use this remarkable book to help your clients visualize and select new arrangements for

kitchens, bathrooms, and utility rooms.

If you want information on any of the rooms in the book, we can provide data including suggestions for room arrangements and decorating that will help to relieve you and your staff of much time-consuming detail work.

Ask your Crane Branch or Crane Wholesaler how you can take advantage of this opportunity.

COME TO CRANE FOR IDEAS

CRANE CO.

GENERAL OFFICES: 836 SOUTH MICHIGAN AVE., CHICAGO 5
VALVES • FITTINGS • PIPE
PLUMBING AND HEATING

REDUCE
FIRE HAZARDS
SPECIFY
STRAN-STEEL® FRAMING



For | **Roof Systems**
Floor Joists
Quickly Erected Partitions—
or Complete Structures

In addition to the many time-saving, money-saving, and structural advantages of Stran-Steel nailable framing, architects and their clients will appreciate the permanent protection offered by this non-combustible framing material. Specifying Stran-Steel roof systems and floor joists can mean the difference between a costly fire and one that is easily localized and controlled. Also, architects can point to lower insurance costs possible with Stran-Steel framing.

The versatility and strength of Stran-Steel framing make it easily adaptable to the latest trends in design. And the speed with which the precision pre-cut members can be assembled brings a worthwhile reduction of in-place building costs. Close-in time is shortened, and interior work can

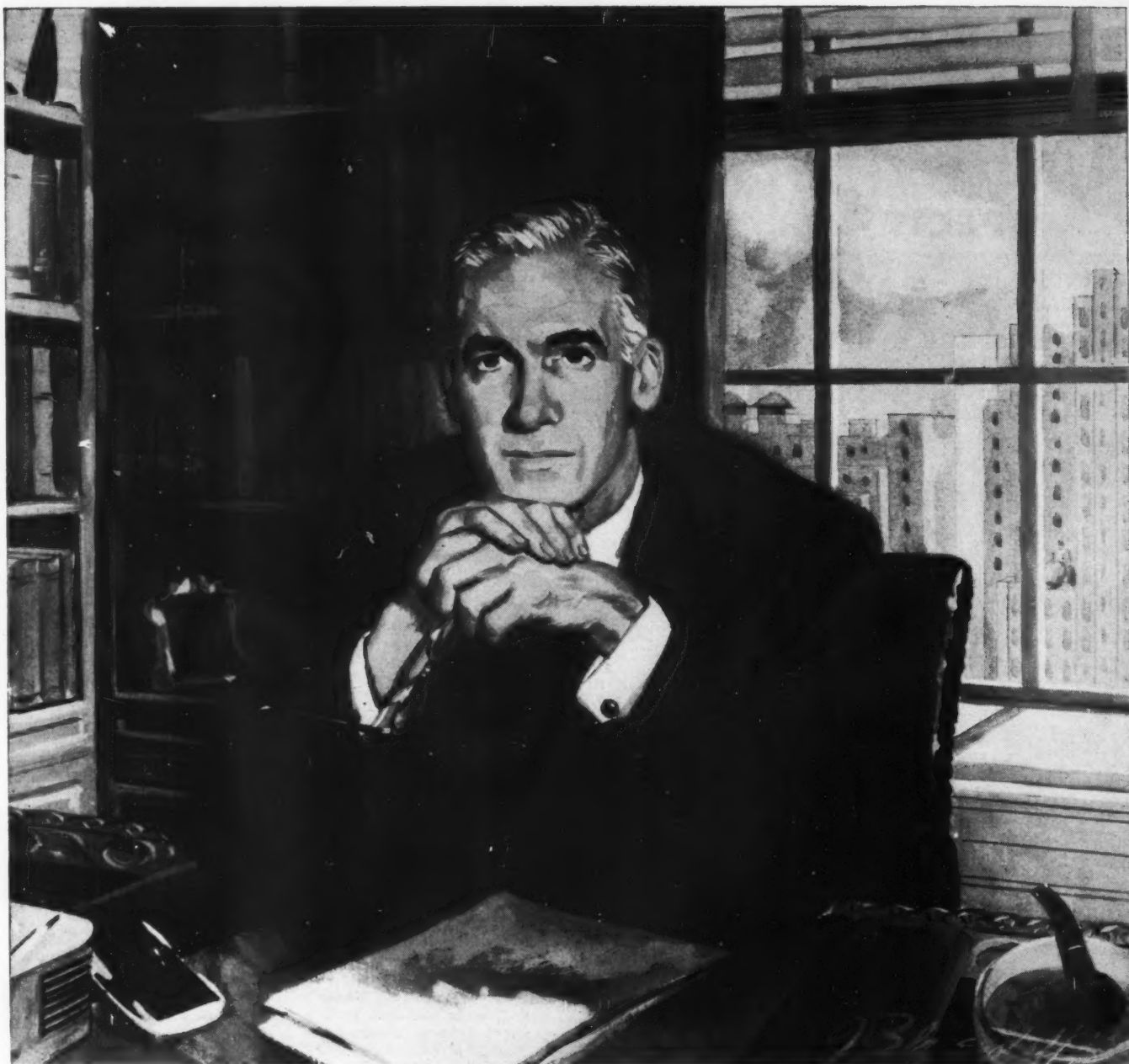
proceed before exterior completion. The nailability of Stran-Steel framing means additional economy, too, in the application of collateral materials.

Fire hazards will be minimized in the Robstown, Texas, Elementary School, because of the use of Stran-Steel framing. Wall finish on the interior will be gypsum plaster on rib lath. On the exterior, brick veneer over Steeltex wall lath with 3/4" mortar bond. Benjamin K. Wyatt, San Antonio, is the architect.

If you are planning new industrial or commercial construction, or schools, hospitals and similar structures, it will pay you to investigate Stran-Steel framing. Complete literature available on request, or see Sweet's catalog service, architectural and builders' files.

GREAT LAKES STEEL CORPORATION
 Stran-Steel Division Ecorse, Detroit 29, Mich.
NATIONAL STEEL CORPORATION





plenty of reason to set you dreaming

This is a time for planning, by business men of vision. The day must come when allocations and priorities will be words of the past . . . when materials will be much easier to get and orders perhaps much harder. Against that day, let some of your dreaming center on stainless steel,

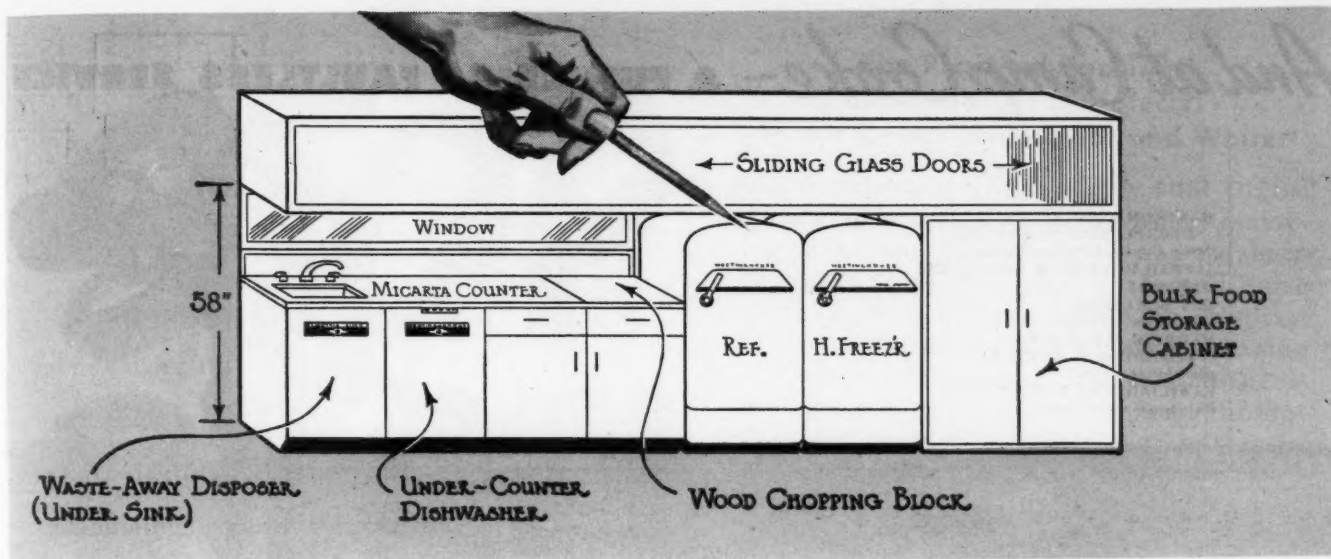
the most uniquely useful metal in the book—hard, strong, beautiful, everlasting.

● Our Development Engineers and Research Staff are at your service. Let us work with you. *Allegheny Ludlum Steel Corporation, Oliver Building, Pittsburgh 22, Pa.*

You can make it **BETTER** with
Allegheny Metal



W&D 4063



This IDEA will save Thousands of Steps

COMPLETE FOOD STORAGE CENTER SIMPLIFIES MEAL GETTING

Your clients will like the idea of *complete* food storage concentrated in one area of the kitchen.

When frozen, staple and refrigerated foods are together, storage and selection of food is quick and easy. The question of what to prepare for dinner, or what groceries to shop for, can be answered conveniently with a minimum of steps.

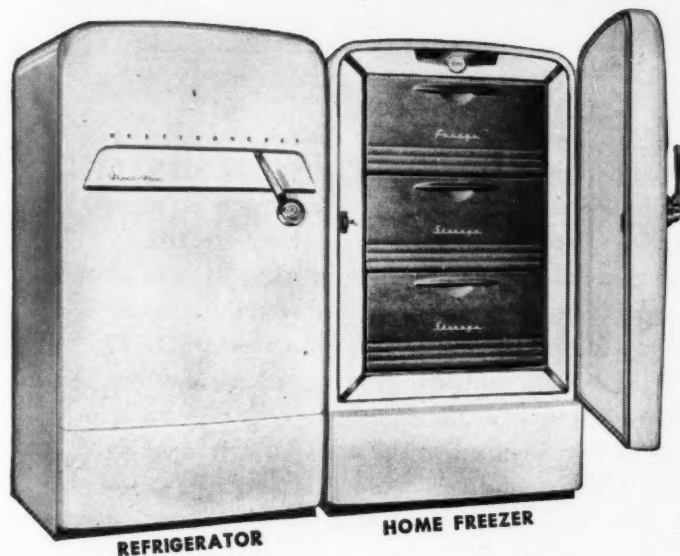
The Westinghouse "Upright" Home Freezer makes a food storage center easy to plan into new homes. It takes no more space than a refrigerator of comparable size. By adding only 28 $\frac{3}{4}$ lineal inches the

Freezer can be included, and its distinctive styling and size make it a twin to the SD-8, DD-8 or DFD-75 Westinghouse Refrigerators. Storage cabinets can be installed above these appliances at convenient height.

You can specify a Westinghouse Refrigerator and Home Freezer with the knowledge that they will give lasting satisfaction. Both are powered with the exclusive Economizer Mechanism that has an unexcelled 23-year record of economical trouble-free performance.

Here, again, is another example of the originality and adaptability of Westinghouse-designed appliances. Look through our new 1952 catalog. You'll find that Westinghouse Appliances offer many opportunities for flexibility in planning homes for electrical living. Send for your free copy.

... of course, it's electric!



Westinghouse Electric Corporation
Electric Appliance Division
Mansfield, Ohio

Please send me a copy of your new 1952 Appliance Catalog.

Name

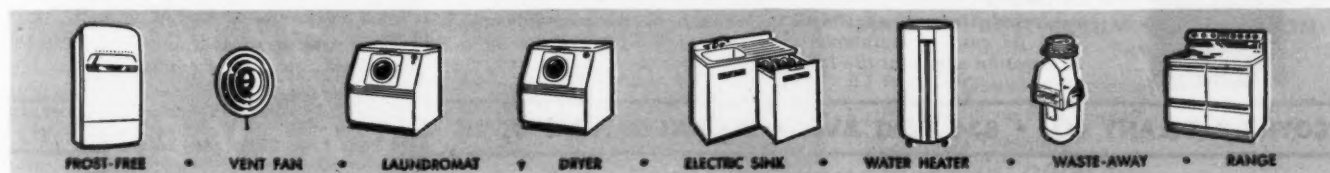
Firm Name

Street

City & State Zone

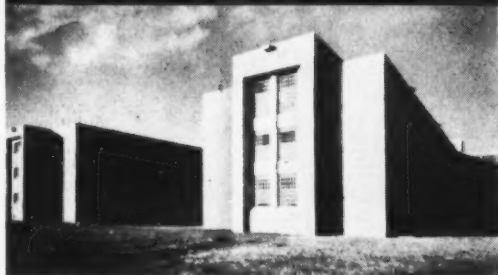
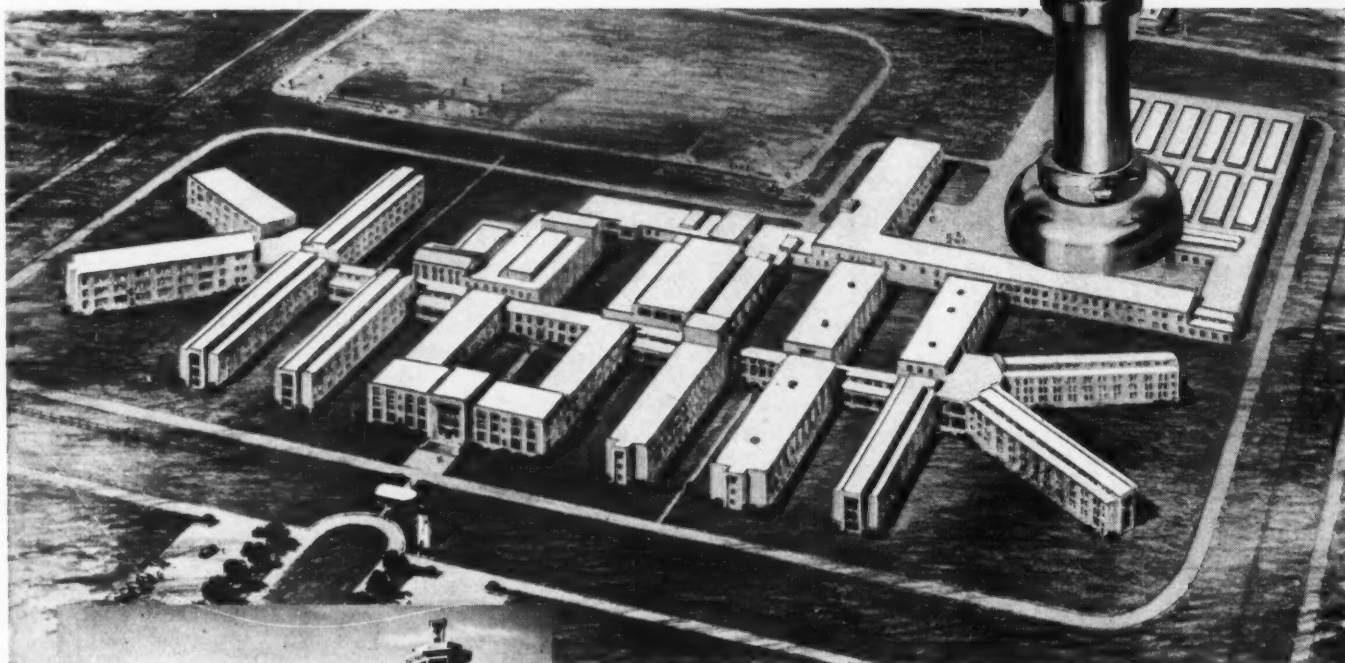
AR-6

YOU CAN BE SURE..IF IT'S Westinghouse



And at Camp Cooke— A FUTURE OF FAULTLESS SERVICE

MAXIMUM SECURITY
DISCIPLINARY BARRACKS,
Camp Cooke, Lompoc, California
ALFRED HOPKINS & ASSOCIATES
architects
GUY B. PANERO
mechanical engineer
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PLUMBING & HEATING
plumbing contractor
FAMILIAN PIPE & SUPPLY CO.
wholesale distributor



Maximum is an apt descriptive phrase for this huge COYNE & DELANY FLUSH VALVE installation recently completed on the West Coast.

Intended for maximum security, it is likely by its very nature to also receive the maximum in abuse.

Performing their part in reduced maintenance effort are nearly 1200 diaphragm type DELANY VALVES—rugged and trouble free due to the distilled simplicity of their design. Fine performance is further insured by the use of the pioneer DELANY NO. 50 VACUUM BREAKER — providing the maximum in health protection.



The only vacuum breaker that assures freedom from water pollution, at all times, is the DELANY NO. 50 VACUUM BREAKER. Not only will it tell-tale the slightest defect, but, of paramount value, it will function as intended even though neglected. Streamlined, simple in design, with only one moving part, its ease of maintenance is evidenced by the cut-away illustration shown at the left.

COYNE & DELANY CO. • 834 KENT AVE. • BROOKLYN, NEW YORK

IN CANADA: THE JAMES ROBERTSON CO., LTD.

DELANY
Flush
VALVES

Since
1879

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with

RUST-OLEUM®

The Practical Coating!
Beautifies As It Protects!
In All Colors, Aluminum and White!

Cut maintenance costs. Apply RUST-OLEUM directly over rusted surfaces without removing all the rust! Just wirebrush and use sharp scrapers to remove rust scale and loose particles, then apply by brush, dip, or spray. Costly sandblasting and chemical precleaning are not usually required. Specify RUST-OLEUM for every rustable metal surface. Prompt delivery from Industrial Distributors in principal cities.

RUST-OLEUM CORPORATION

2513 Oakton Street, Evanston, Illinois



FREE SURVEY: A RUST-OLEUM specialist will gladly survey your rust problems. He'll make specific tests and recommendations. No cost or obligation. See Sweets for complete catalog and nearest RUST-OLEUM distributor, or write for literature on your company letterhead.

*Protects Tanks, Girders
Fences, Stacks, Metal Sash,
Roofs, Buildings, Marine
and Railroad Facilities*

Stopping Rust with
RUST-OLEUM
769 D.P. Red Primer

Look for this label. Be sure
it's genuine RUST-OLEUM!



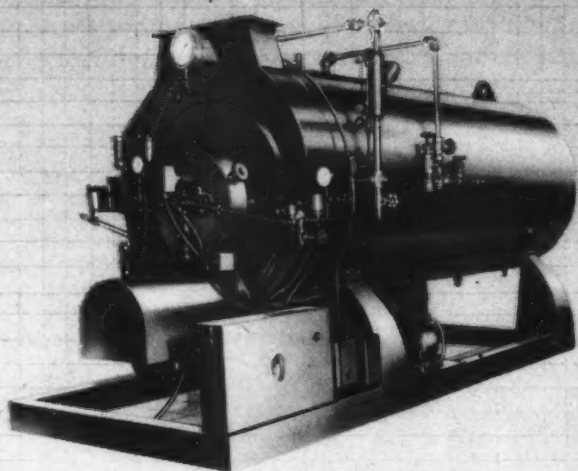
CLIP THIS TO YOUR LETTERHEAD
MAIL TO: RUST-OLEUM CORPORATION
2513 Oakton Street • Evanston, Illinois

- ☐ Have a Qualified Representative Call
- ☐ Full Details on Free Survey
- ☐ Complete Literature
- ☐ Nearest RUST-OLEUM Source

3=5

when you use

Cyclonic Combustion!



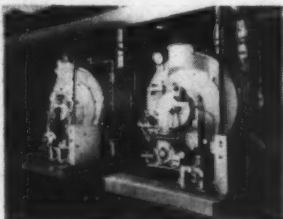
Yes, 3 square feet of heating surface with Cyclonic Combustion equals the 5 square feet of heating surface offered to you by other packaged boiler units.

The Cyclotherm Cyclonic Combustion Principle is an entirely new and amazingly different method of heat transfer in the boiler industry.

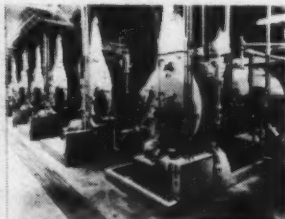
Air enters the combustion chamber at extremely high velocity in a revolving spiral vortex which travels the entire length of the furnace. The fuel is introduced into the entering air where it is slowly consumed as it moves in a cyclonic motion down the combustion chamber. This highly luminous slow burning flame radiating heat to the fire tube through direct radiation and by convection, results in an unusually high rate of heat transfer.

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Full power operation from a cold start in 15 to 20 minutes. Savings up to 50% on maintenance. Guaranteed 80% efficiency.



When large installation requirements exceed 500 HP, sizable fuel savings can be obtained by battery installations. Based on an analysis of your steam requirements, a number of units would be recommended which collectively add up to your peak steam demand.



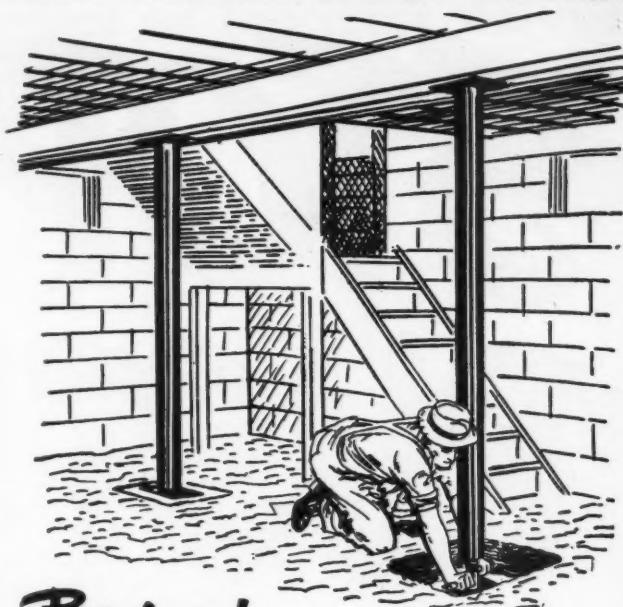
On one typical installation as shown above, a battery of 200 HP Cyclotherms has saved over \$12,000 a year in fuel alone. Maintenance and operational cost have been reduced to 75%.



CYCLOTHERM steam generators
CYCLOTHERM DIVISION UNITED STATES RADIATOR CORP.

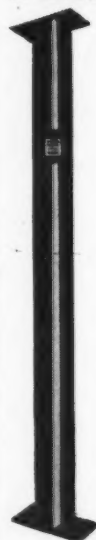
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STEEL-STRONG post with standard base plate

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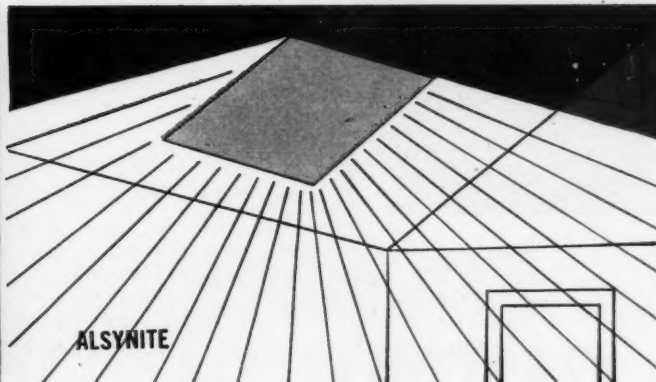
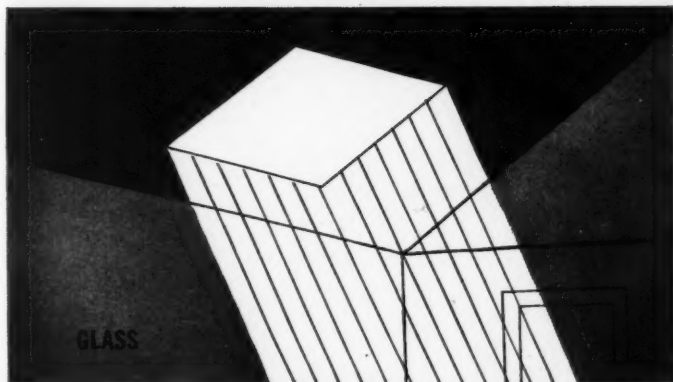
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Alsynite

BOUNCES DAYLIGHT

Spreads light more evenly throughout interiors

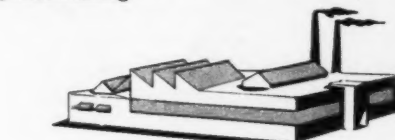
Alsynite is made of glass fiber and resin. As light rays pass through it, they are bounced and deflected in all directions. This eliminates glare and produces a soft, diffused light throughout the interior.



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Seven colors for decorative uses

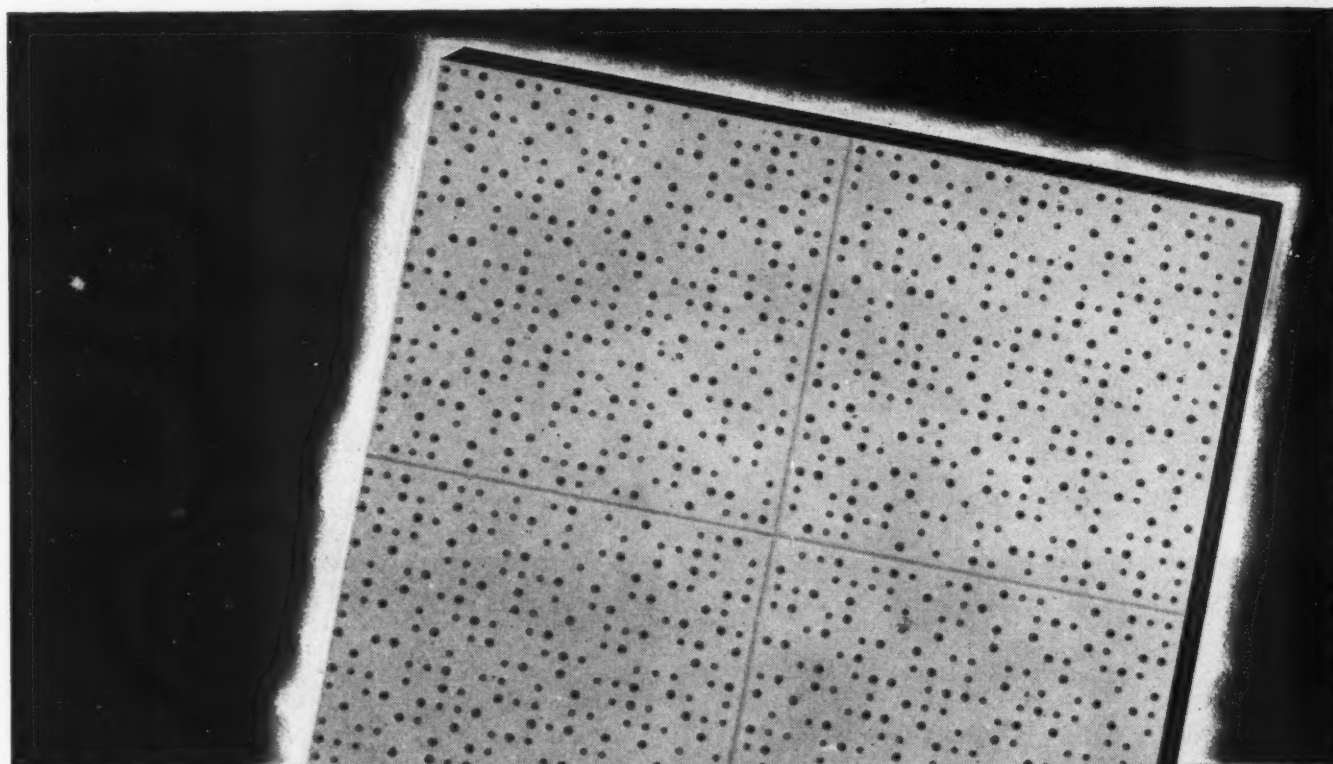


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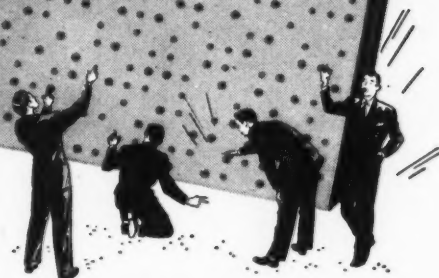
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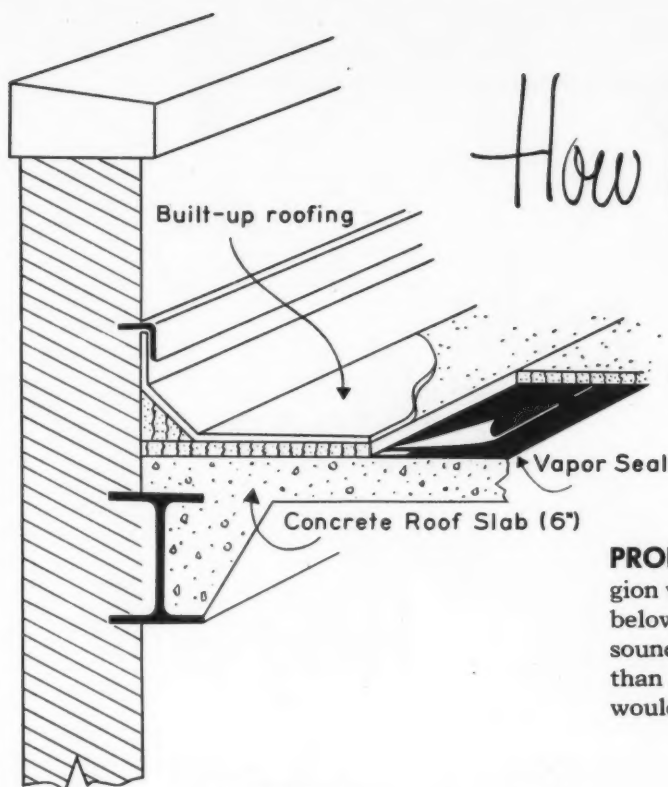
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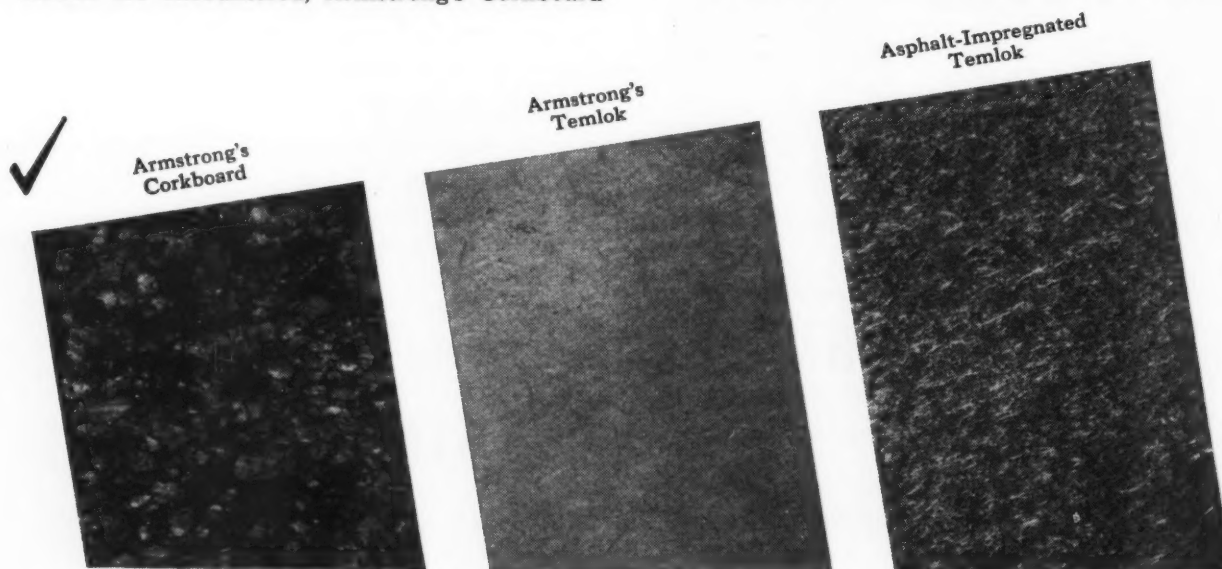
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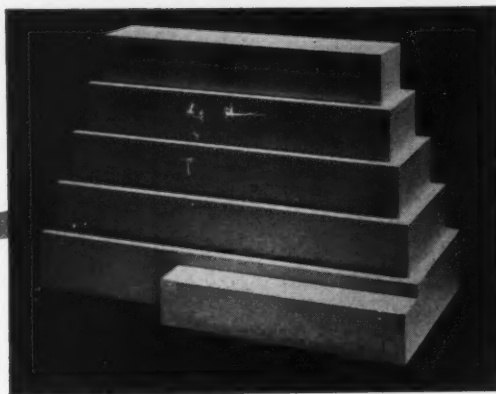
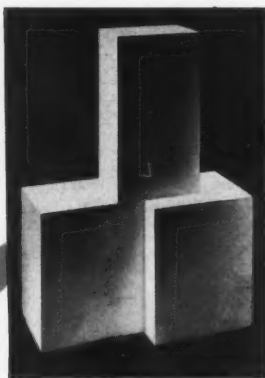
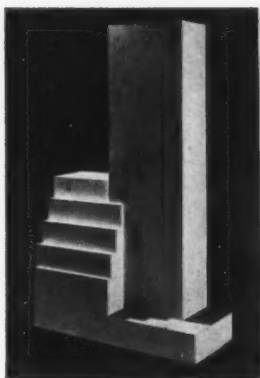
OFFICE BUILDINGS

ARCHITECTURAL RECORD'S BUILDING TYPES STUDY NUMBER 187

THE OFFICE SPACE within which this country's business is carried on has changed quite radically in recent years. In metropolitan centers the skyscraper concept remains, but the era of bigness for bigness' sake which reached a dubious fruition just at the time of the 1929 market crash does not now exist. Costs of construction and the emergence of different materials, of advanced design techniques, of mechanical equipment whose potentialities were barely foreseen two or three decades ago, are two reasons for the change. The emphasis is increasingly on quality of accommodation at relatively low cost.

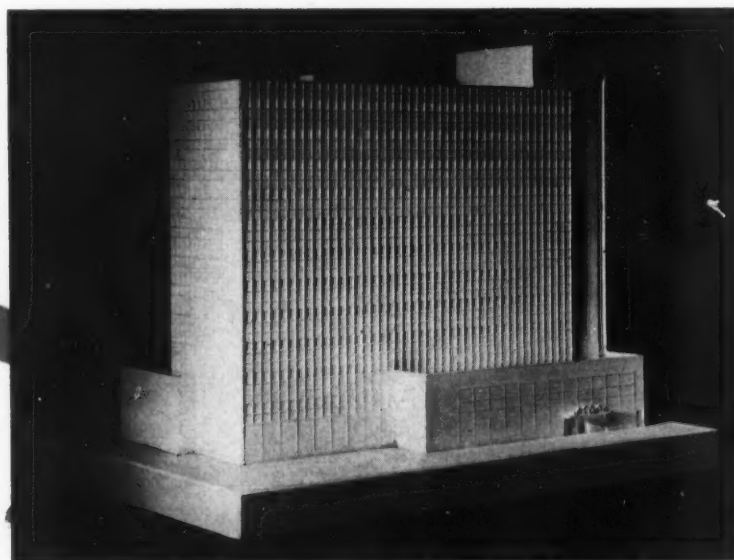
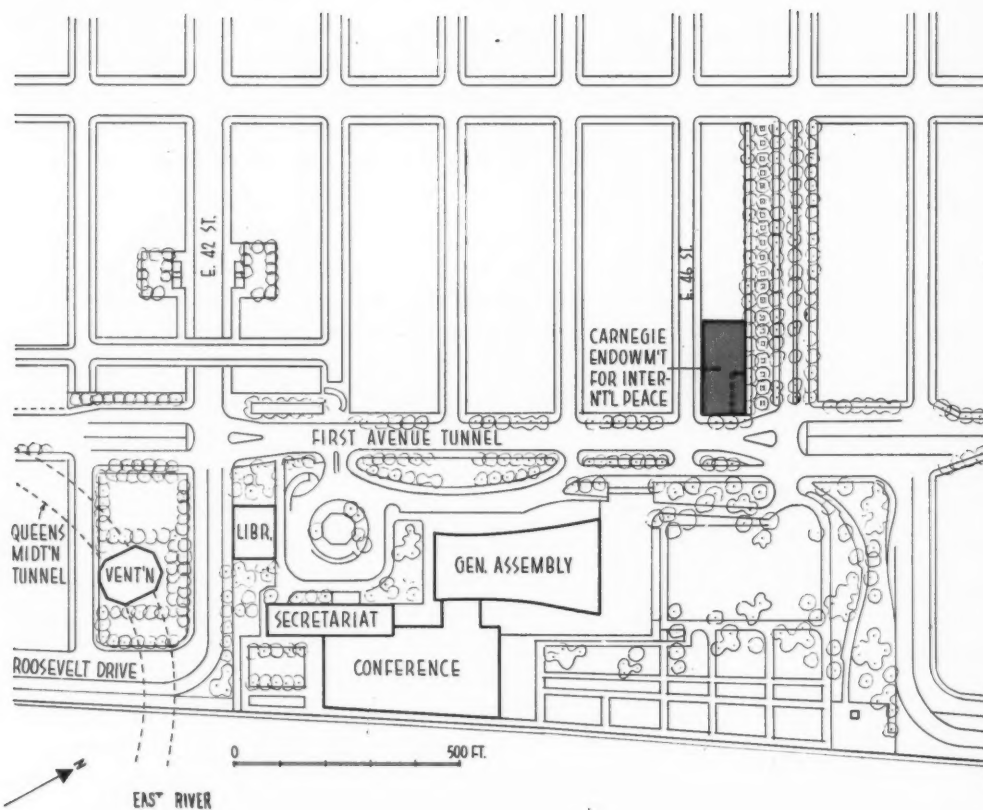
The speculatively built office building (that is, one erected for a multiplicity of anonymous tenants) has not pioneered many of these changes. One would hardly expect it to; the speculator, who by definition takes the huge risk of building the structure at all, cannot afford to gamble in the smaller matters. Like the speculative builder of houses for sale, he believes he must employ the tried architectural devices. We find on the other hand that the client who builds for his own use is more bold; his buildings are the pioneers; sometimes, as in the case of Harris Armstrong's American Stove Company Building, in Lever House, the Alcoa Building, the U. N. Secretariat, the Carnegie Building and other recent examples, the private owner sees in these new ideas a means of impressing himself, his company or his product indelibly on the public consciousness. The U. N. Secretariat is also a symbol, of a somewhat different sort.

It is also significant that the comfort of the occupants of these pioneer buildings is considered important. The tenant is given light, views, air at its mechanically controlled best; he is transported vertically and his mail is whisked away with automatic precision and speed that are awesome. Something of this filters down from the skyscraper even to the two-story taxpayer; in fact, it is characteristic of smaller office structures that they provide control of sun, glare, heat, cold and air movement or else, generally speaking, their occupancy records are not so good. The demand for economical construction has led to thin membrane walls — some of them hard to justify solely on the basis of economy — and to experimentation with framing systems, even to fairly complete integration of equipment in the structure. One of the most advanced of these concepts is contained in the new building of the Carnegie Endowment for International Peace, an analysis of which is presented in the following pages.



CARNEGIE

EN



Harrison & Abramovitz, Goldstone & Abbe, Architects

James Dawson, Supervising Engineer

ENDOWMENT FOR INTERNATIONAL PEACE

Severud, Elstad & Krueger, Structural Engineers

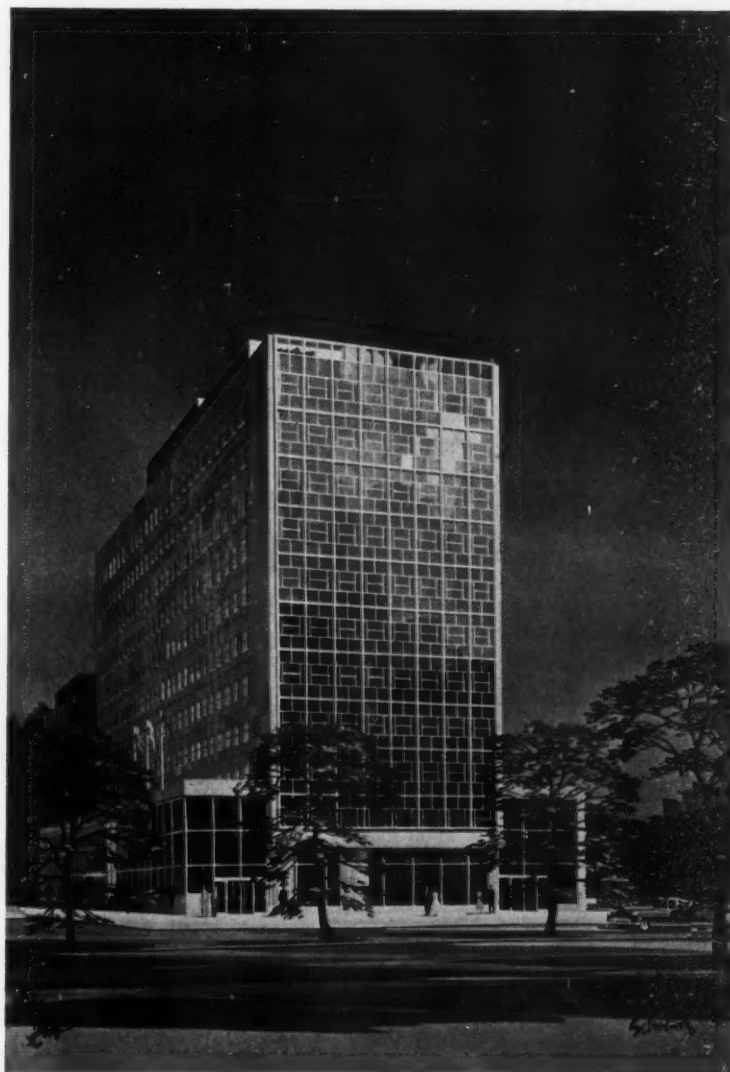
Syska & Hennessy, Mechanical and Electrical Engineers

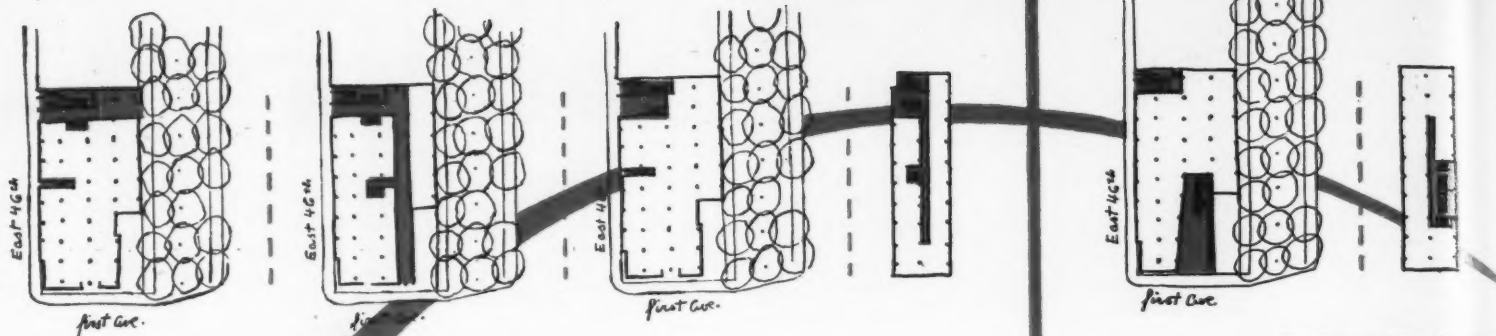
Cauldwell-Wingate Co., General Contractors

THE BUILDING FOR THE CARNEGIE ENDOWMENT for International Peace, now rising opposite the entrance to the United Nations enclave on First Avenue in New York, is unusual in occupancy, site and design. Many of its characteristics are not apparent to the casual observer; almost all of them are important, at least in principle, as concepts for careful study.

Regarding occupancy: Above the ground floor, the Carnegie Peace Building is to be occupied entirely by international organizations and agencies of non-governmental types — charitable, cultural, professional, social, commercial, etc. — such as the Endowment itself, Rotary International, and many other familiar bodies. These all have a common trait. They are strictly limited as to the amount they can spend for housing their own organizations. Consequently the Carnegie Peace Building had to be designed to squeeze the maximum of rentable floor area out of the minimum building envelope — a factor in designing the average speculative building but here even more potent, and, since the owner was not afraid to pioneer, an actual stimulus to design progress. Also, these organizations are tax-exempt. In order to reduce rentals even further than extreme design economy would permit, it was decided to lease most of the ground floor to commercial tenants; on this portion of income the owner will have to pay taxes. However, the structure is not intended to make a profit.

The site, fronting on First Avenue (United Nations Plaza) and running through from 46th St. to the park-like widening of 47th St. which will form the public approach to the U.N., was assembled like any other real estate holding. Not until design had been completed and excavation begun did the northeast corner lot become available. This helped determine column spacing





CARNEGIE PEACE BUILDING

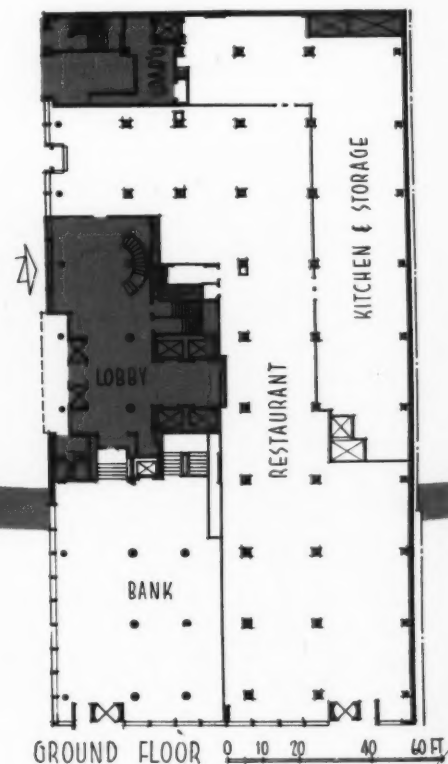
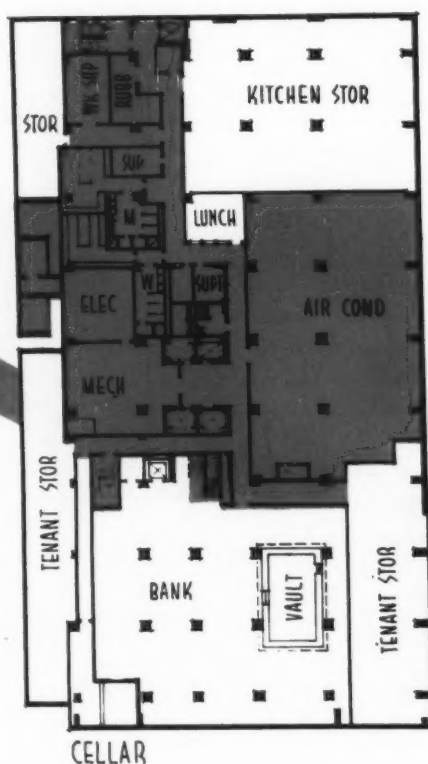
Plan, like the building envelope, underwent many evolutionary steps of which a few (not in exact order) appear above. Left, early first floor scheme with services at west, main entrance on widened 47th St. Next, after 47th St. access was denied, services still at west, entrances on 46th St. and First Ave. Next, another scheme with westerly service core, 46th St. entrance only. Next, typical floor required for all three lower floors to left; note long travel to elevators, secondary stairs. Two right-hand sketches, scheme with service core on north side of tower, main entrance on First Ave., minor trucking entrance (primarily for restaurant) on 46th St. This conception sacrificed much of the most valuable ground floor rental space on First Ave. and was abandoned despite advantages.

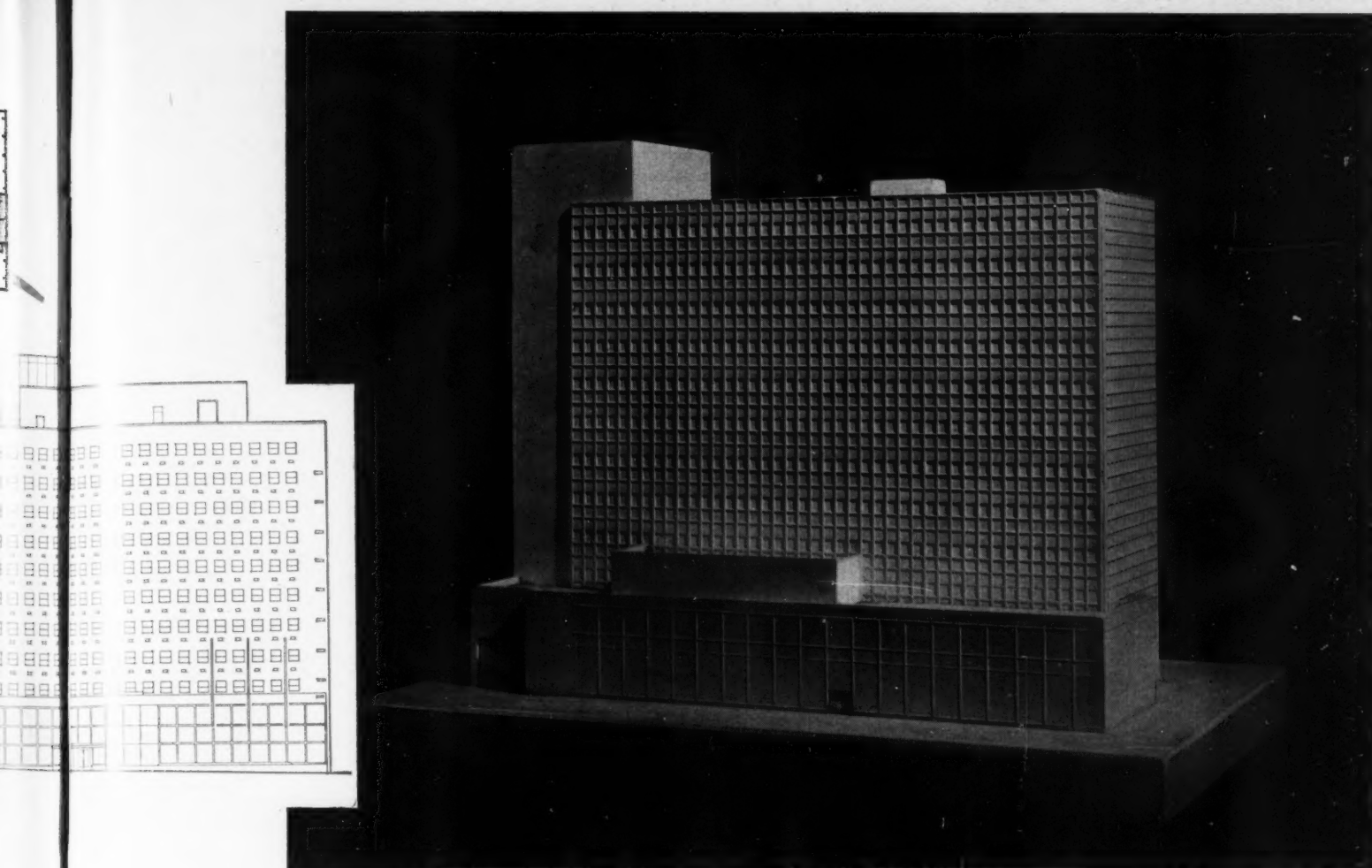
Final plan has main entrance on 46th St., utilizes all First Ave. frontage for commercial rental space. Secondary entrance on 46th St. is for trucks and service to both commercial and private restaurants. The single cellar floor is quite crowded; to obtain even the small amount of tenant storage space sidewalk vaults were necessary. Advantages of final scheme include an impressive 2-story lobby connecting directly with the International Center on the second floor, plus the simplicity of the typical tower floor loft space. In tower note that service core is concentrated; corridor distances can be at minimum, toilets have outside windows. Carnegie Endowment offices are to be on 11th and penthouse floors. On all tower floors, duct spaces at east and west ends of service core carry the limited air conditioning supplies needed for the few possible interior offices. Column spacing is such that, on the north, single-row offices can be one bay deep; on south, bays accommodate typical anteroom plus private office

and tower placement in plan. At first, the main entrance was to be from 47th St., on the north. However, the city's Park Department, which has jurisdiction over the park strip that widens 47th St., denied the Endowment access (in line with usual city policy) and the plan had to be restudied (see sketches). The location is most important. The agencies housed have fairly close liaison with the U.N.; in fact, at one time in U.N.'s development they were to be accommodated in the northernmost U.N. building, the one which was later eliminated.

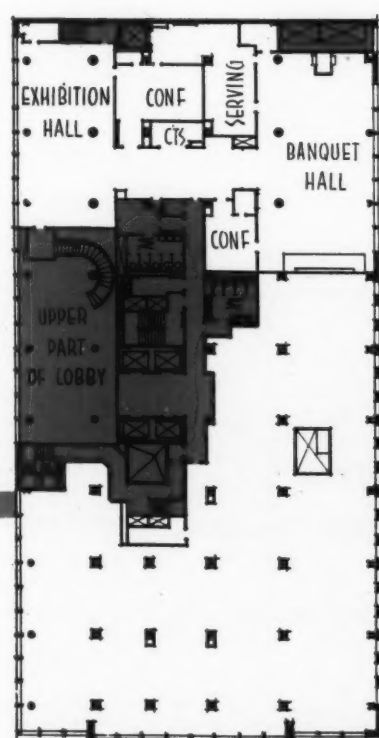
The architects and engineers worked closely in designing the Carnegie Peace Building. Structure, mechanical equipment and electrical systems are thoroughly integrated. In the 9-in. structural flat slab are contained all electrical ducts and conduits;

(Continued on page 127)

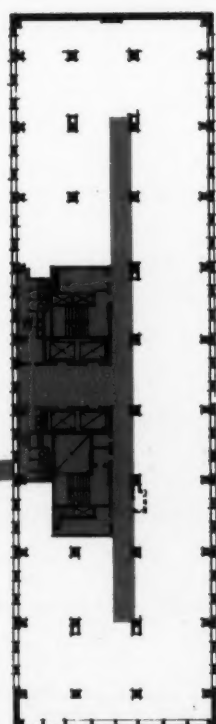




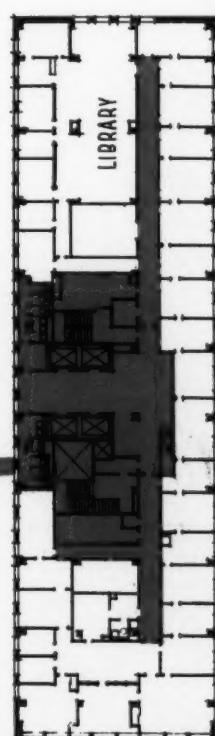
Above, photo of model as it was developed when three sides of building were metal and glass. Left, south elevation (north similar) after these walls were changed to masonry and windows. Two lower floors remain glass, metal



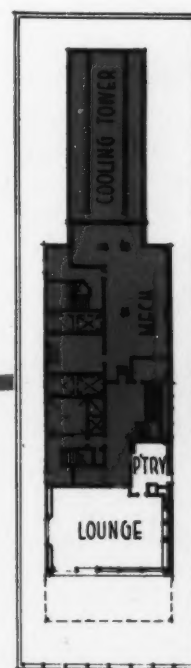
SECOND FLOOR



TYPICAL FLOOR

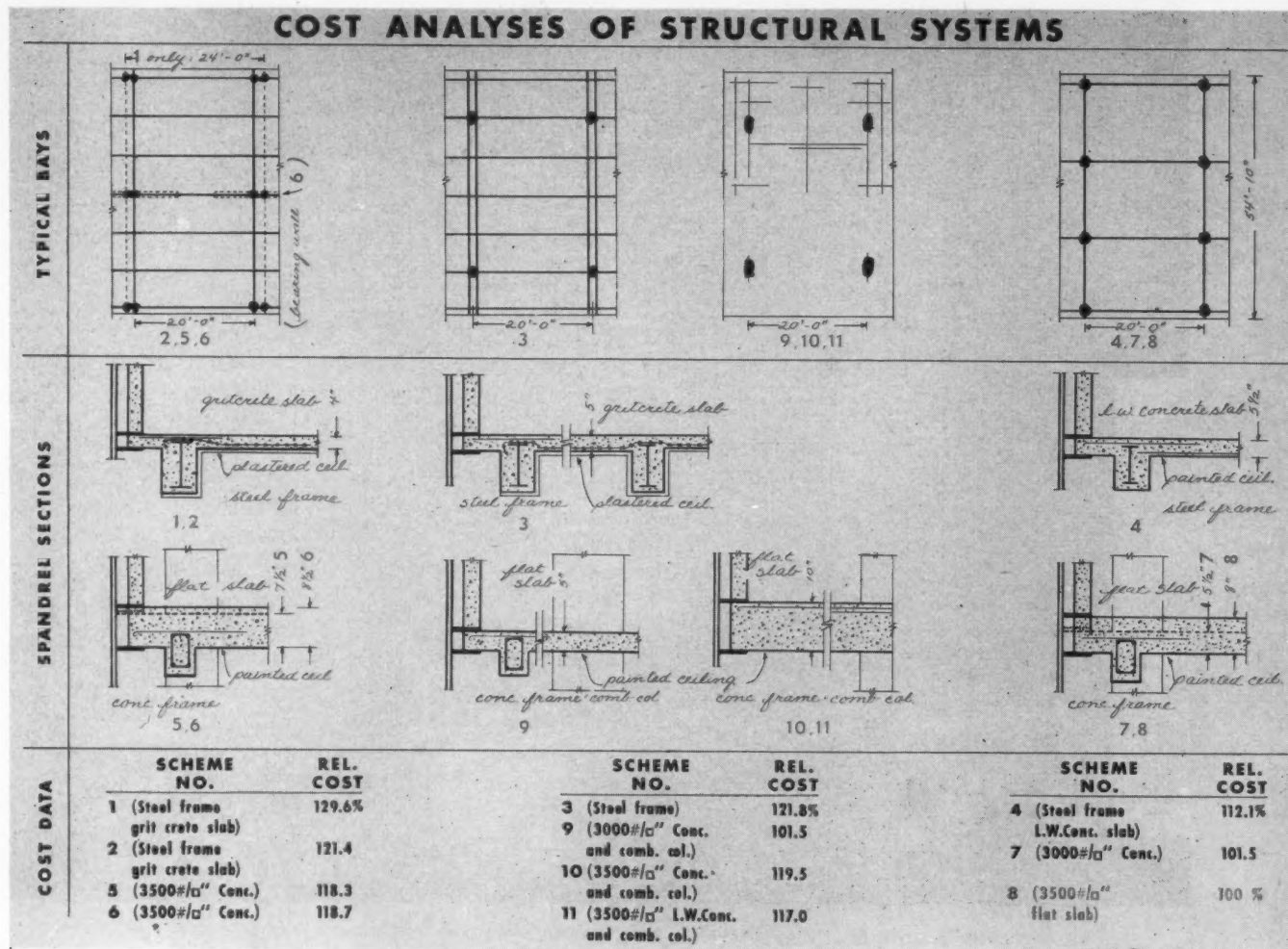


ELEVENTH FLOOR

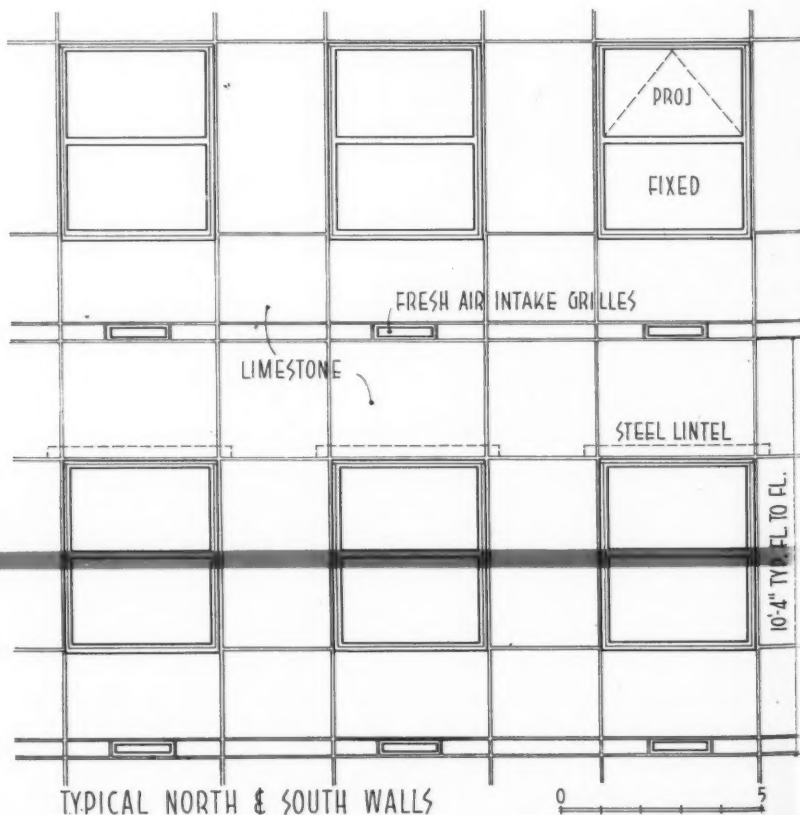
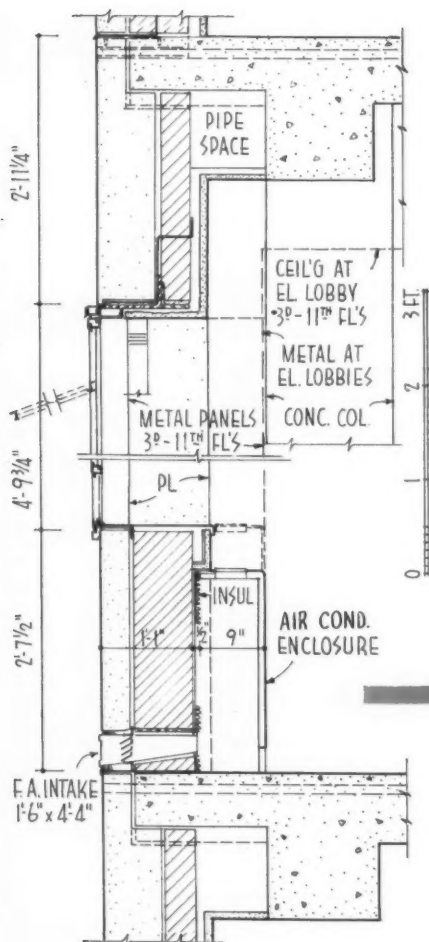


PENTHOUSE

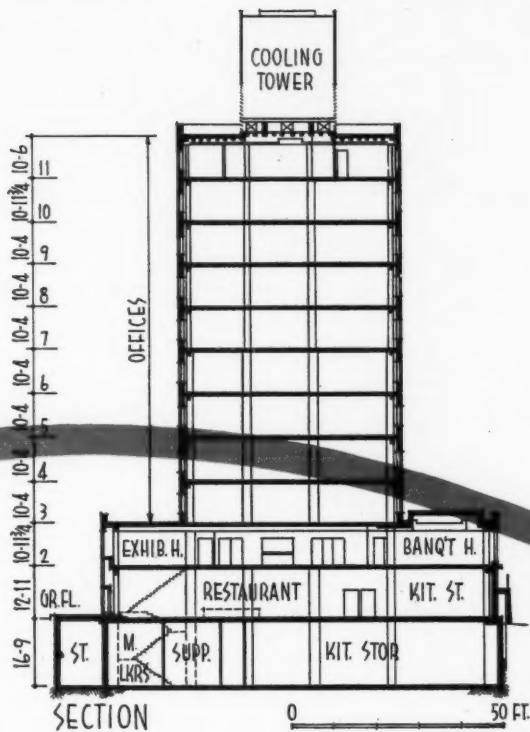
COST ANALYSES OF STRUCTURAL SYSTEMS



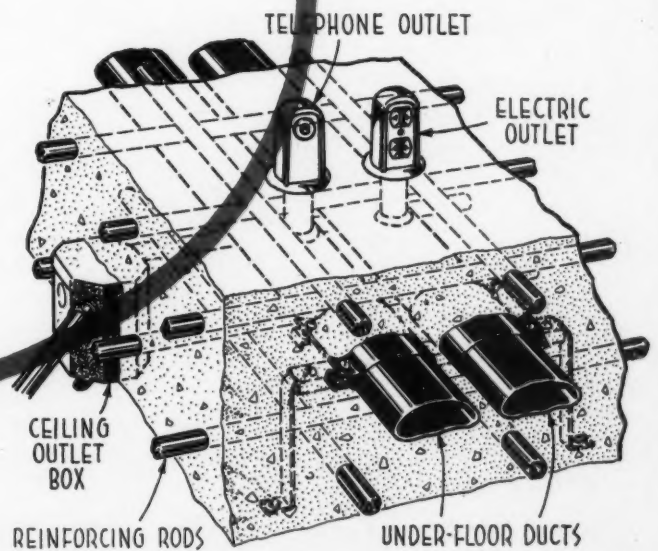
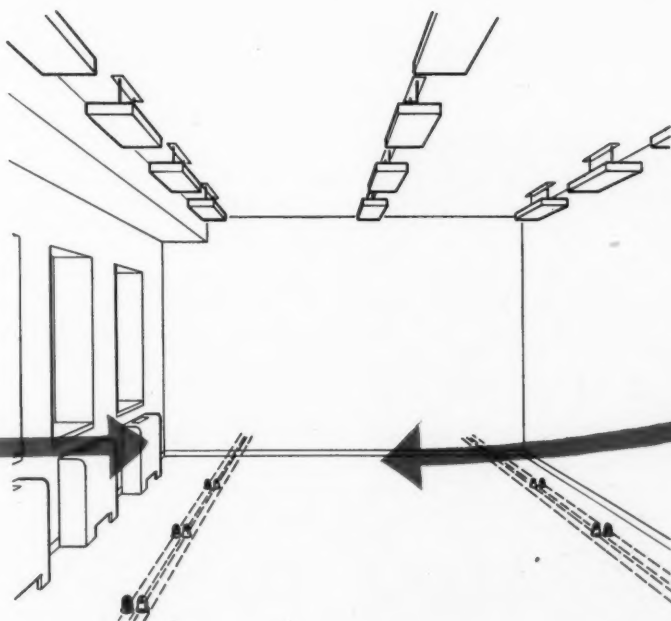
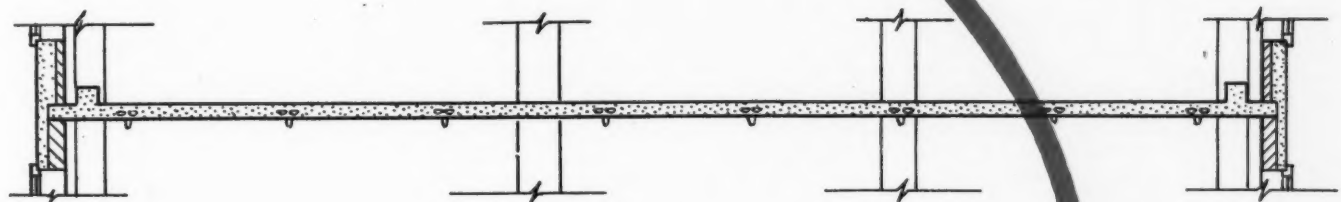
Above, analysis of eleven different structural schemes prepared by the engineers during design process, arranged according to column layout. Cheapest scheme, Number 11, uses concrete columns, an 8-in. flat slab flush on underside except for continuous peripheral beam. When all electrical services were built into structural slab, thickness had to be made 9 in. Left, detail of air conditioners which eliminated most ducts

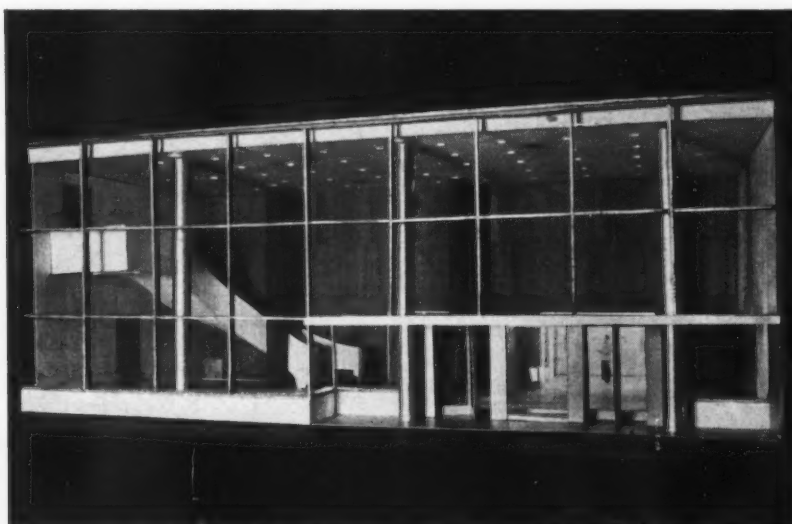
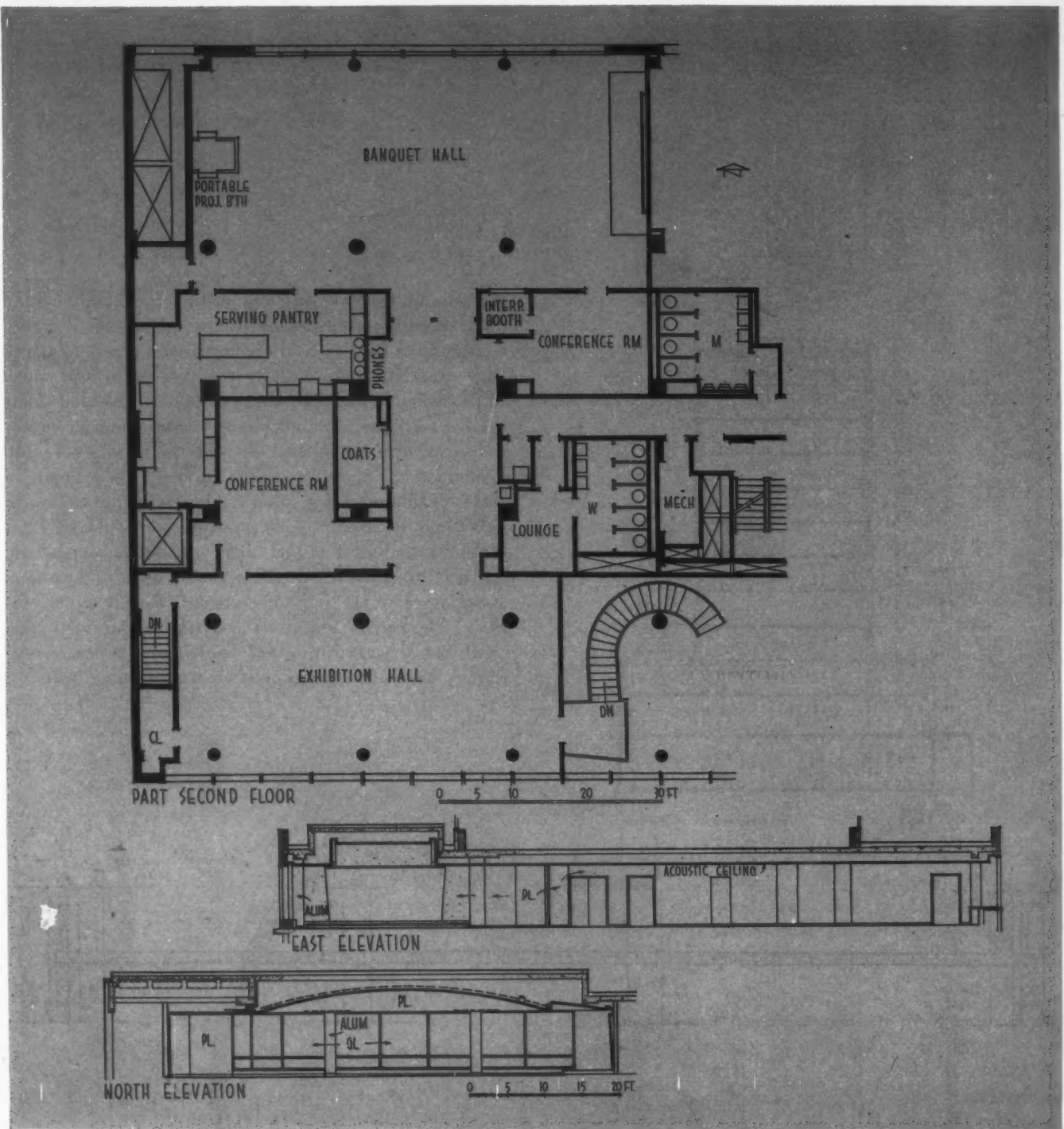


STRUCTURAL AND MECHANICAL DESIGN



this eliminates floor fill and ceiling finish other than paint directly on the concrete. The individual air conditioners have heating and cooling media piped to them; they draw fresh air directly through north and south walls, which eliminates most air ducts (the small ducts needed for possible conditioning the few interior spaces are supplied from vertical ducts in the service core and demand little depth of ceiling furring). As a result of this coordinated design, floor-to-floor height in the tower is held to 10 ft 4 in. — in contrast to the 11 to 12 ft normally required. Until final estimates, north and south facades as well as the east face were to be metal and glass, like the U.N. Secretariat. Construction cost forced the use of limestone facades on the north and south tower walls; an added benefit of this last evolutionary step was reduction in air conditioning load.



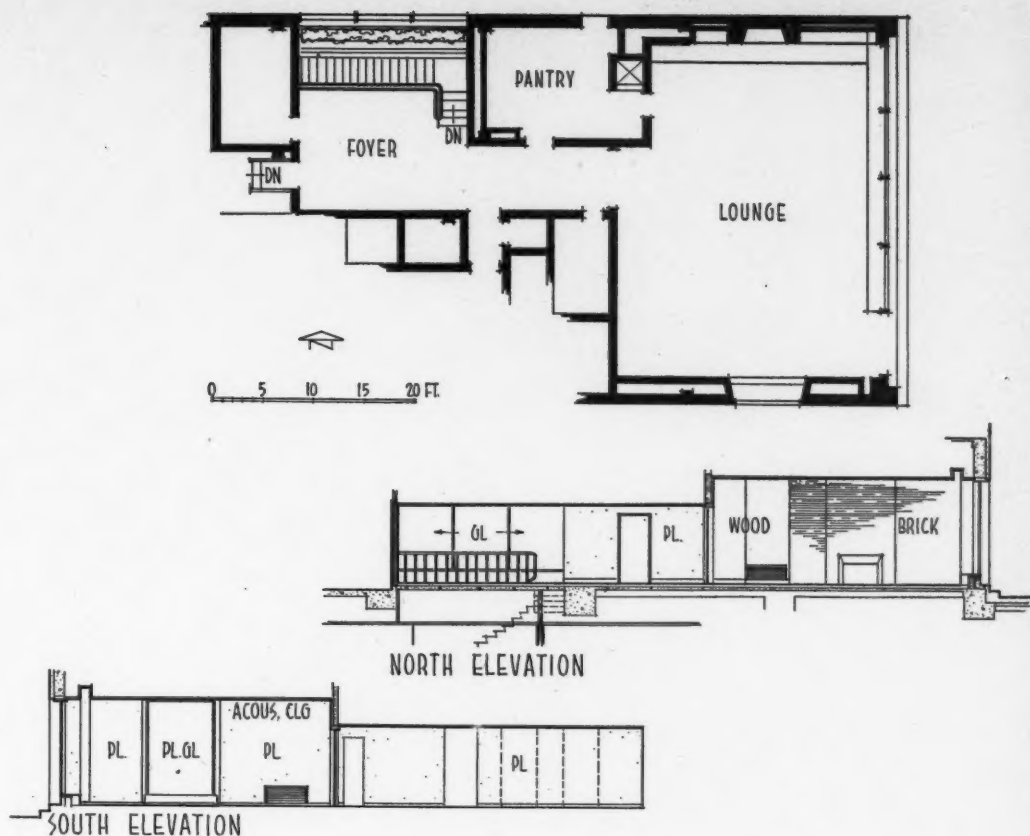


Left, study model, 46th St. Lobby, showing stair to International Center. Probably to be finished in wood, it is intended to have both warmth and scale

CARNEGIE PEACE BUILDING

Right, plan and elevations of Carnegie Endowment Lounge on penthouse floor. Interior design has not been finally determined

Left, plan and elevations, International Center on second floor. Note the physical connection by stair with the 2-story lobby on the 46th St. side. Service elevator (far left) connects with first-floor service entrance, restaurant kitchen, and kitchen storage in basement. Since these drawings were made the Center has been expanded; a Lounge has been added to the right of the Banquet Hall, with its entrance directly from the elevator lobby (not shown). Below, construction status early in May, 1952





LEVER

H

Architects: Skidmore, Owings & Merrill

Structural Engineers: Weiskopf & Pickworth

Mechanical Engineers: Jaros, Baum & Bolles

HOUSE, NEW YORK: GLASS AND STEEL WALLS

Interior Design: Raymond Loewy Associates

Contractor: George A. Fuller Company

THE EXTERIOR OF LEVER HOUSE — 24 stories of blue-green heat-resistant glass and stainless steel — was a technical design problem which required the joint efforts of architects, engineers, general contractors and sub-contractors. Its glass-paned skin is designed to be kept sparkling clean (Lever Brothers, manufacturers of soaps and detergents, are naturally pleased at this) with minimum difficulty or expense. The building has no openable sash. This not only prevents the entrance of the big city's dirt and grime, but is a means of reducing the total air conditioning load. It also lessens interior maintenance.

The heat-resistant glass likewise reduces both the air conditioning load and sun or sky glare. Wire glass faces the spandrels, which the building code required to be of masonry. The structure itself is of conventional steel frame, with tower bays so laid out that only narrow vertical mullions, formed of paired channel shapes, interrupt the glass. Horizontal mullions and muntins are similarly light in section; all are sheathed with 16-ga Type 302 stainless steel which is secured to the exterior glazing channels with hand-driven screws. Glazing channels were in turn screwed to structural mullions; the operation (see details on following pages) took time and was obviously expensive. However, this office building was designed for sole occupancy by Lever Brothers — even its ground floor has no tenants; a reasonably high construction cost, commensurate with the aim of providing an imposing, almost institutional, edifice, was not inappropriate.

The openness of the ground floor (where much of the area is garden and pedestrian walks with only the essentials enclosed in glass) is also somewhat monumental, if not in expression certainly in its fundamental regard

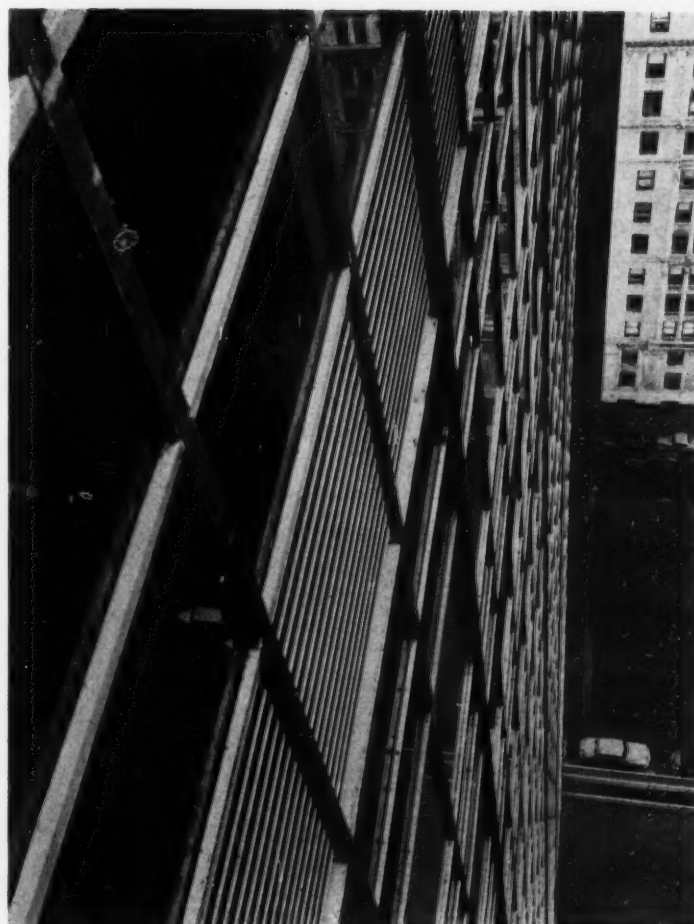
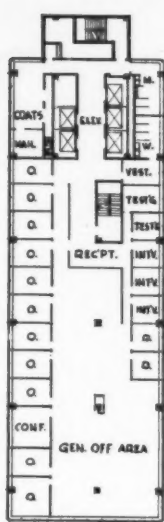
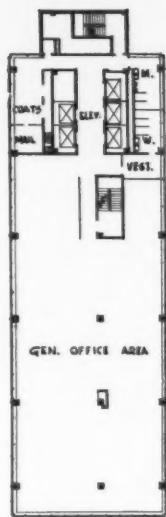


Photo opposite: Ben Schnall

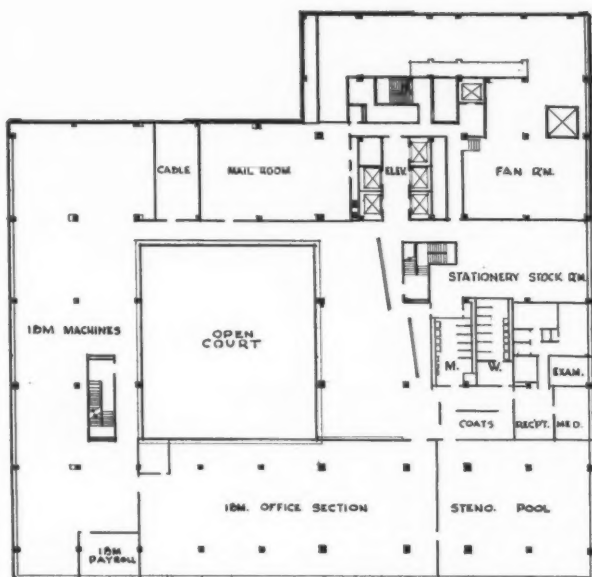
LEVER HOUSE



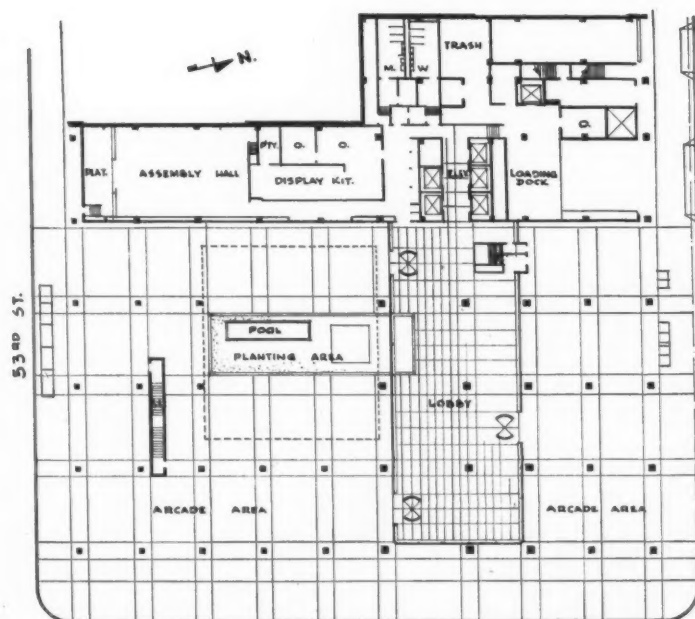
5TH FLOOR



6TH FLOOR



2ND FLOOR



SCALE 1" = 20'-0"

PARK AVE.

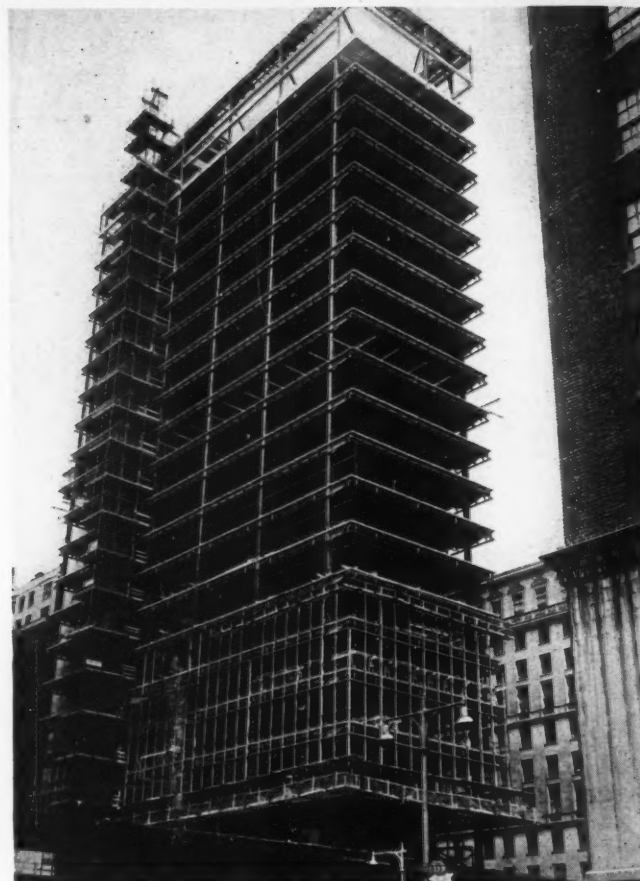
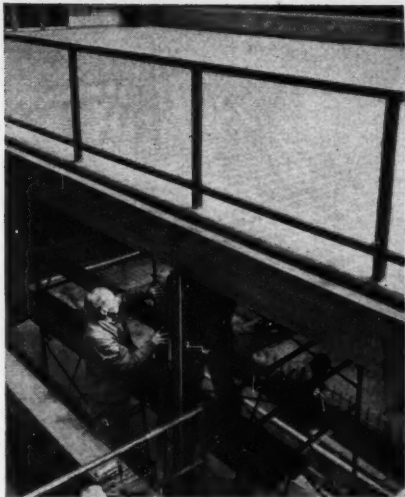


Photo courtesy Geo. A. Fuller Co.

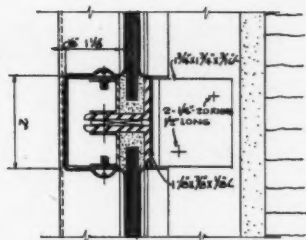
for the citizens of New York. In this aspect, the entire structure is thoughtful, pleasant and a decided advance over the average speculative building. Above the few lower stories the tower is so designed that its slim bulk permits what it can of a city vista — an impression heightened by the contrasting surroundings. This is something to be grateful for. Like the U. N. Secretariat, like the new Carnegie building now under construction (see preceding pages), it is a narrow slab, which means that the typical office floor will contain few dark cubicles. The design is an enlightened venture in public relations, and is to be applauded; the glass and metal skin, also a source of public interest, becomes rather a stunt by comparison.

In plan, the enclosed ground-floor area contains display and reception space, waiting areas for visitors, a demonstration kitchen and an auditorium. On the second floor are employees' lounge, medical suite, general office facilities. On the third floor, lowest of the tower, is the employees' cafeteria overlooking roof terraces. The remaining floors, up through the 21st, house offices of the parent and subsidiary companies. Above are the equivalent of three floors of mechanical equipment. In addition to complete air conditioning, the building is fitted with what has been called "the most modern fire alarm equipment"; and with a conveyor system, newly developed, which not only picks up internal and outside communications and distributes them vertically, but also transports them horizontally to the mail room. In such technical aspects, Lever House is marvelously ingenious.

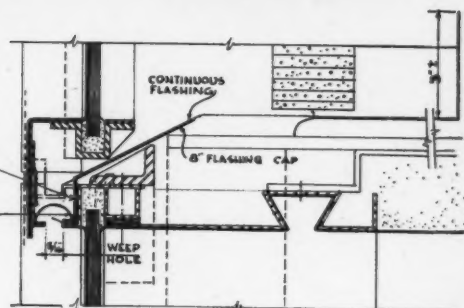
Photos courtesy Lever Brothers



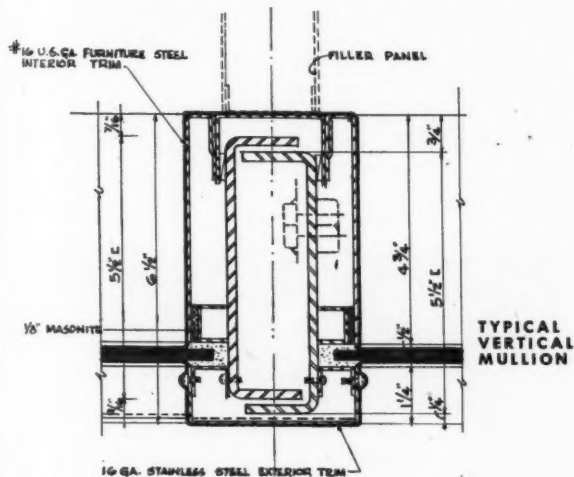
Applying the glass-and-steel skin: facing page, fundamental structure complete, stainless steel being applied, June 1, 1951. Above, left, setting stainless steel (note hand tools bottom of photo); center, close-up at spandrel, viewed from window-washing gondola; right, stainless steel interior sills, flush with spandrel members, are also outlets for high-velocity air conditioning system. In details, note cap, shield and sleeve flashings



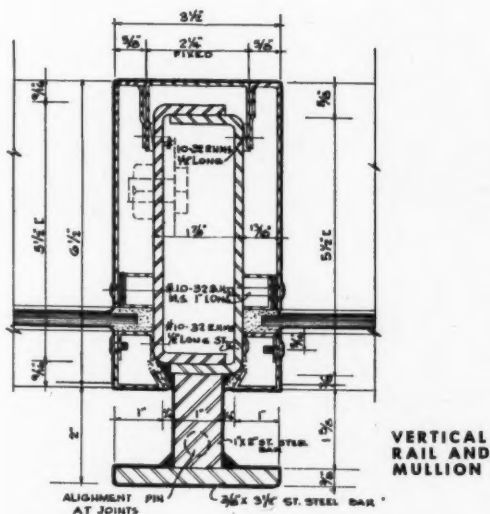
SPANDREL MUNTIN



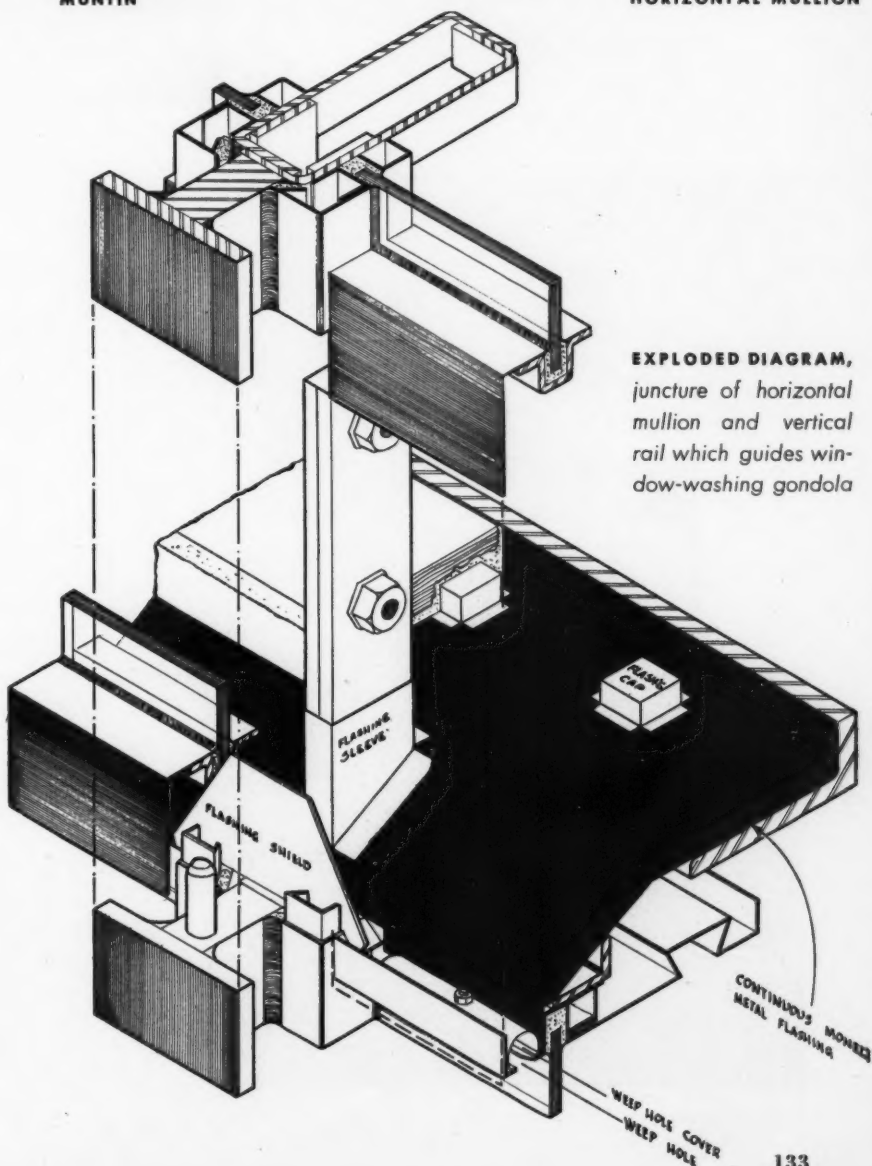
HORIZONTAL MULLION

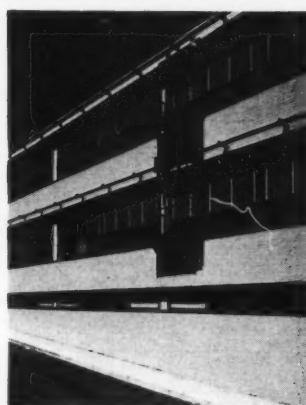
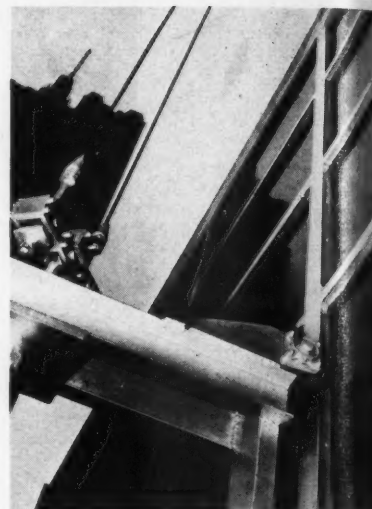
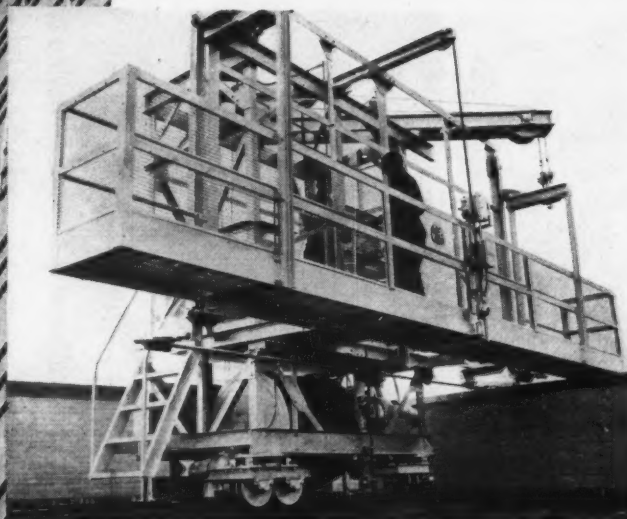
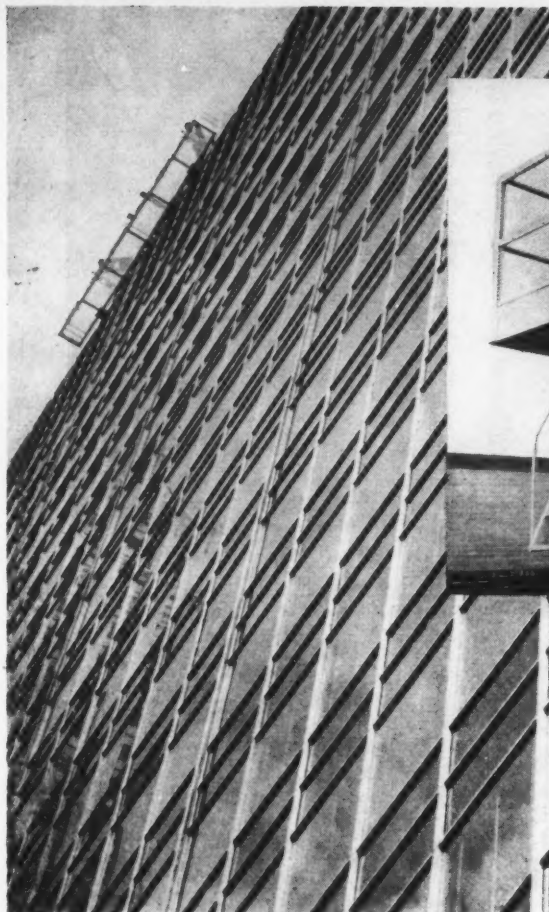


TYPICAL VERTICAL MULLION



VERTICAL RAIL AND MULLION





Joseph W. Mollitor

Heat-resistant glass—1404 panes—and stainless steel members are cleaned by two men with water, detergent and squeegees, from a traveling gondola. Top left, gondola at top of tower; center, 10½ ton power plant travels around perimeter of roof on railroad rails (gondola is being positioned to go over the parapet); right, flat mullions steady plastic rollers at ends of gondola. Lever House gondola is not the first window-washing machine. Center, left, shows one prototype used on Wake County Office Building, Raleigh, N. C. (William H. Dietrick, Architect) published in *ARCHITECTURAL RECORD* Sept. 1951, pp. 149-151. Others have been employed in this country and abroad



Stainless steel is also employed extensively inside the building. Left, stainless steel revolving door and housing, with air conditioning outlet in jamb; above, stainless-steel-sheathed columns at sidewalk arcade; note open ground floor

Photo opposite, Ben Schnall



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OFFICE DESIGN

Prepared by Caleb Hornbostel, Architect

DUE TO THE SHORTAGE of office space in most cities since the start of World War II, tenants have gradually accepted the responsibility and cost of alteration in order to obtain satisfactory quarters. The architect found that he was being called in not only when a new structure was planned but also for remodeling and interior redesign. With the continuing heavy demand for office space, his practice may include anything from the layout for a one-room office to altering several floors of a large building and even designing specialized small buildings in situations that are often not satisfactory. Basic layout for office space, be it large or small, usually includes the following areas: reception, waiting or dis-

play; main or executive business offices; and subsidiary office space, including work areas, pertinent to the business itself.

An office generally presents much the same requirements as a classroom. The problems in lighting both natural and artificial, of the acoustics of the area as a whole and of soundproofing individual offices, of storage space, of the use of color, and of flexibility in internal arrangements, are common to both. The main design problem usually is to fit the client's office and circulation needs into the limitations imposed by existing conditions. What is interesting is how the difficulties themselves are often turned into design assets.

ORIENTATION

TODAY'S client has become conscious of comfort. In other words, he is now aware how important it is to make his office a pleasant place to work in. Therefore, orientation is the first factor the architect will consider in arriving at his final design. If he may determine the location, he can avoid many of the troubles by selecting a northern or eastern exposure. If the orientation is of necessity southern or western, he must somehow eliminate the effects of solar heat and glare, using perhaps

double glazing, heat-resistant glass, drapes or screens, venetian blinds or interior or external louvers, now available in a variety of designs and materials.

Air conditioning, too, is influenced by orientation. For example, southern or western exposures may require a larger number and higher capacity of units than either northern or eastern exposures.

In short, orientation influences the basic pattern for both large aspects and details of office design.

AIR CONDITIONING

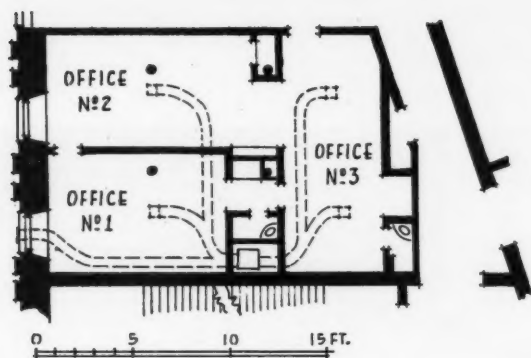
AIR conditioning today is usually installed either as localized units or as a central unit with a duct system. The local unit has the advantage of flexibility, but may demand a special power outlet. Some types require water and drainage and therefore are impractical wherever water restrictions exist. Cost is also a factor, depending on how many units are used.

The central unit with a duct system for each office group, although more economical from the viewpoint of equipment costs, can create other problems. First, as a cost factor, the system of ducts has to be distributed throughout the entire office space, and much of the ceiling area often has to be furred. Second, in the design, the ducts must not cut down too much on ceiling height.

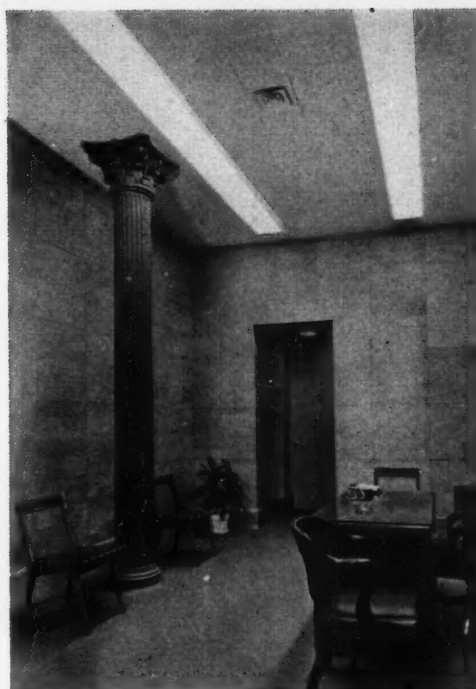
Finally, localized control for individual conditions within the office is usually ruled out by cost. Nonetheless, the central unit remains the best type for a large yet compact office.

In some of the newer large office buildings a central plant supplies refrigerant and heat to every office area. The advantages of these systems are many; foremost among them are complete flexibility, individual control, and a mechanical simplification of air conditioning equipment, which represents a great reduction in cost.

Extensive research is being done on the "heat pump" type of equipment which will, when we know more about its cost under all conditions, supply atmospheric conditions to order the year around.



This alteration, a business office for The Cooper Union in New York designed by Esmond Shaw, is uncomplicated and succeeds in using the peculiarities of this old building, one of the first steel structures put up in America, to advantage. Central air conditioning with a duct system helped cut down ceilings — too high to begin with. The cast iron Corinthian column, painted green, is actually one of the original main supporting structural members and not just a decorative note



Alexander Demaras

REMODELING

THE problems of office alteration are perhaps best explained by taking a specific example, designed by Kenneth Franzheim, Architect, and following the changes made to reach a final scheme (see photos right).

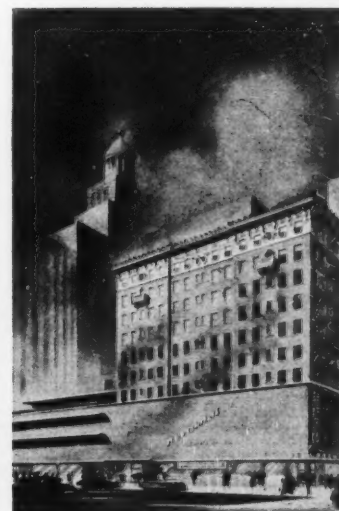
The original San Jacinto Hotel Building, built in 1910, proved a real conversion headache, as original structural drawings were not available and the skeleton had to be exposed before planning could begin.

At the start, the owner, thinking it possible to salvage the upper floors by simply changing the layout from bedrooms to offices, leased the lower four floors with sub-basement, complete from street to street. This forced relocation of elevators to the side street property line. As demolition proceeded, it became evident that only the original structural steel could be salvaged; heavy floor slabs had to go. Since this was in June 1950 when steel was scarce, conversion, instead of rebuilding, went ahead even though the fenestration also proved unsuitable and the entire facade had to be removed.

Office planning within the existing framework and with front location of elevators proved to be unsound economically, as the proportion of rental area to gross area was very low. The owners were then persuaded to extend the building through the block, to bring net rentable area to 80-per cent of the gross. Since the building is air conditioned all year and had good artificial light, the entire lot area was covered, leaving no rear light courts.

This move proved a sound one. The building is almost fully rented at profitable rates, with tenants paying for partitions and individual construction costs.

Bob Bailey



Stuart Wiener

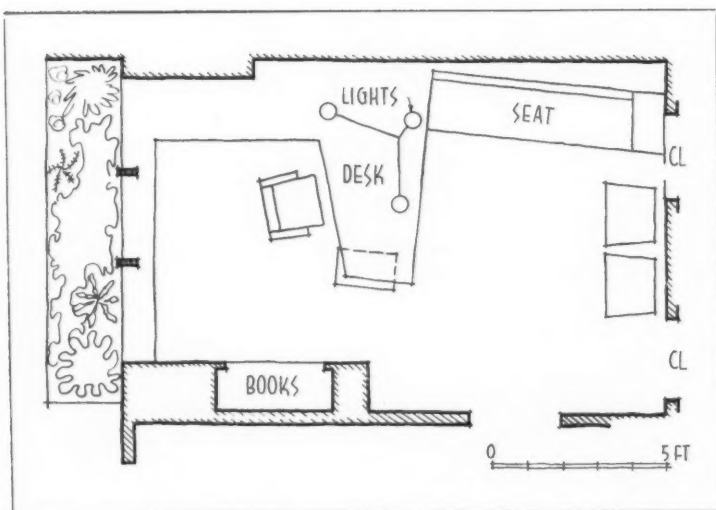


INTERIOR PLANNING OF A

Office for Dean of School of Architecture

University of Southern California

Los Angeles, California



THE STUDENTS IN INDUSTRIAL DESIGN at the University of Southern California undertook the remodeling of their dean's office as an extracurricular project, with results that speak for themselves. What was just a 10 by 15 ft cubicle of office space, with four plaster walls and a narrow strip window at one end, was turned into a very pleasant room. The only set requirement had been a 28 in. high desk with large working surface. Otherwise the design and plan were to be the students' own. The labor was theirs also, as were the design and cabinet work for all the furniture except the two Eames chairs. One wall was faced with $\frac{1}{2}$ by 4 in. oak strips separated by a $\frac{1}{2}$ in. space backed by a strip of industrial cork. This simple device greatly improved the acoustics of the room, which were decidedly poor prior to remodeling. The broad ell-shaped desk with brown plastic top aids the horizontal effect in the very small room. The color scheme is natural oak, brown leather, brown plastic and a blue-green wall opposite the window.



SPATIAL ORGANIZATION

Using furniture to subdivide space

ACOUSTICS

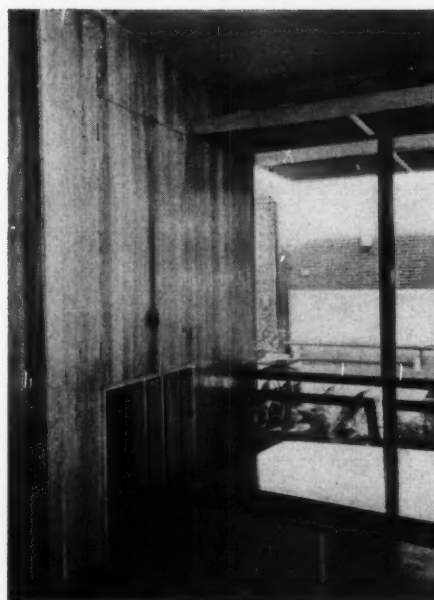
Improved acoustics by clever use of materials

FURNISHINGS

Everything built-in except three chairs

OFFICE DESIGN

ONE-ROOM OFFICE



The complete end wall of the office was removed and replaced by a glass wall opening onto a private patio; ventilating units are at the floor and above the trellis at the ceiling. Beyond the glass wall is a planting area in the patio



The tiny lobby and receptionist's area holds only a desk reduced to bare essentials; the switchboard, files and other office needs are concealed in the small alcove to the left. Below is the cantilevered desk in the semiprivate alcove



Gottsch-Schlesner

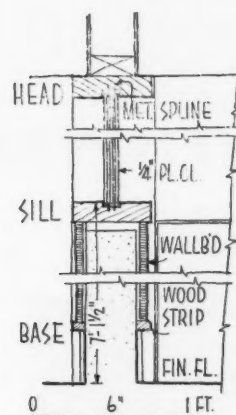
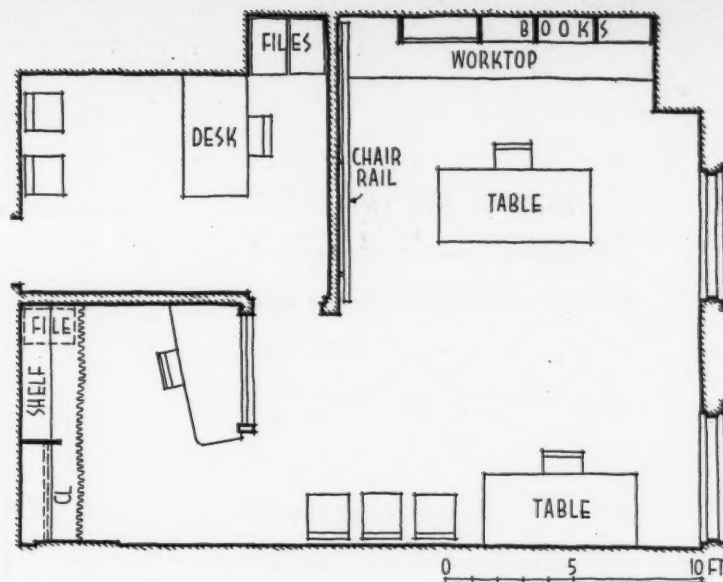


THREE-IN-ONE OFFICE FOR

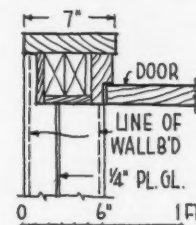
H. B. Humphrey Company, Inc.

New York, New York

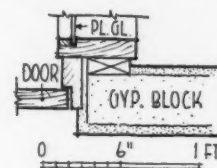
HERE IS AN ADMIRABLY SIMPLE LAYOUT that was worked out for a small commercial office area. Yet this mere "hole in the wall," to use the words of the advertising firm which had its start here (the company has expanded and merged with Alley & Richards, Inc.; it is now H. B. Humphrey, Alley & Richards, Inc.), was so carefully scaled and stripped to the bone that it gives the impression of being much larger than it actually is. The basic requirements for three separate work areas — reception, work and private conference — were met by using only three partitions: one a solid wall; one a screen wall of glass above and fiber board below, which can be



Typical Wall Section



Jamb Details at Partition (above),
at Desk (below)



ADVERTISING AGENCY

Ketchum, Gina & Sharp, Architects

used for display on both sides; and one a floor-to-ceiling glass panel between the main working area and the ell of space on the other side of the solid partition setting apart the receptionist's area. This alcove serves for conferences with individual clients and gives a certain amount of privacy. The large work area can also be used for conferences by pushing the two large table desks together to form one long table. The old radiators were left in place and only venetian blinds were added to the windows at the outside wall. The drape across the entire length of the semiprivate alcove hides a coat closet and a surprising amount of storage space.

INTERNAL CIRCULATION

One door controls inside circulation

STORAGE

In existing niche, in hung cabinets and behind a curtain

PARTITION

Use of minimum partitions to sub-divide space

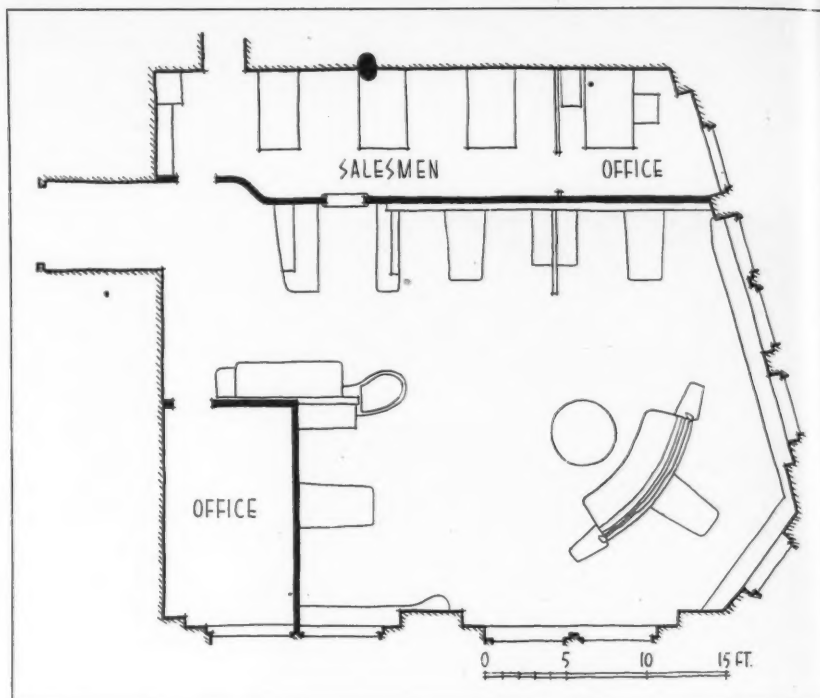
OFFICE DESIGN

SPATIAL ORGANIZATION

Reception, waiting, display and multiple sales booths in one area

AIR CONDITIONING

Local units installed throughout



MULTI-PURPOSE SHOWROOMS AND SALES OFFICE

Ben Schnall



Receptionist's area with sales cubicles behind it, and the view from the entrance into the main showroom

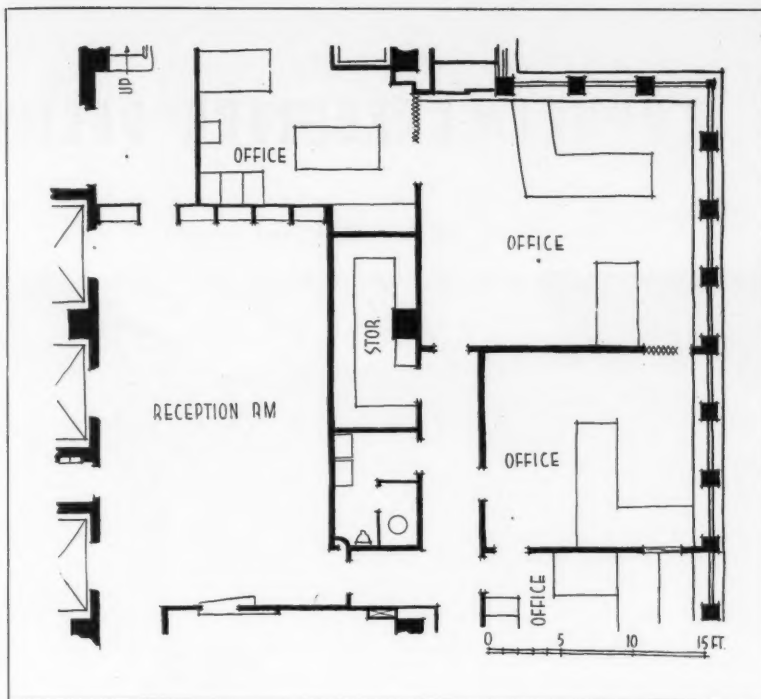
The Bernhard Altmann Corp.

New York, New York

Gerhard E. Karplus, Architect

THE INITIAL DIFFICULTIES lay in basic construction — the removal and conversion of several dentists' offices with their complicated plumbing. The client expressly desired that the main showroom reflect the "luxury and romantic background of cashmere," and seem a relaxing living room rather than a place of business. Therefore soft colors, murals and plants were used. The entire floor area was carpeted, the ceiling was furred and acoustically treated, and existing windows are concealed behind continuous drapes.





AIR CONDITIONING

Supplied by central system in building

LIGHTING

Designed to approximate daylight

PARTITIONS

Use of translucent glass with back lighting

OFFICE DESIGN

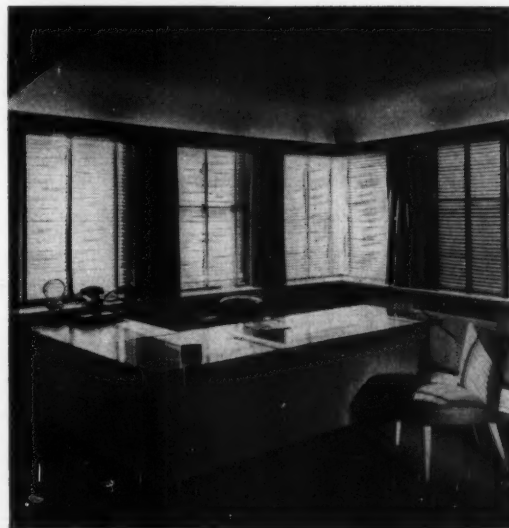
OFFICE DESIGN IN AN AIR CONDITIONED BUILDING

Tishman Realty Company

New York, New York

Seymour Joseph, Architect

IN A NEW BUILDING where air conditioning is supplied, interior office space is as desirable as perimeter locations. The design of the reception area here illustrates this point. Translucent glass partitions and planting boxes add to the open feeling. Unseen advantages in such buildings are twofold — mechanical difficulties and economic factors of air conditioning are no longer the tenant's concern, and the only problems of orientation are to cut down sun glare and control light, a simple matter of drapes and venetian blinds in this office.



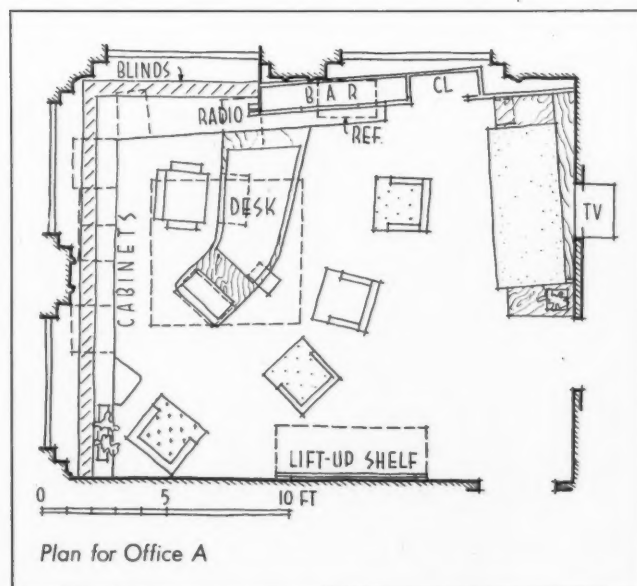
Ben Schnoll

EXECUTIVE OFFICES

Gottsch-Schleisner



Corner office, marked A in General Plan, with two false walls. Wood panelled wall holds bar, closet, refrigerator, storage units and air conditioning equipment. Two hinged panels cover bar



WITH "PROBLEM" WINDOWS

Offices for Holly Stores, Inc.

New York, New York

Morris Lapidus, Architect

WHERE THE EXTERIOR WINDOWS are as unattractive and badly situated as they were here, and whenever the orientation is poor, the best answer often is to close off the original external walls with false screen walls. These two offices illustrate three different solutions to the problem. In the one office (A in General Plan) shown on the facing page, vertical cloth louvers screen the upper section of one wall and part of the adjoining wall, yet permit daylight to filter through. The lower wood-panelled portion that extends along both false walls holds drawers, storage space and special equipment. In the other office (B in General Plan), there is only one screen wall, back of which are the radiator, air conditioning and additional storage compartments.

Both offices are elaborately appointed to serve the needs of top-level business executives. The larger and more complex of the two (office A) has facilities for business conference and entertaining which include a bar, radio and television. The desks in both offices have been specially designed and integrated with the other fittings of the room. The ceilings are hung acoustical plaster, with skylight-type fixtures over the desks.

SCREEN WALLS

Three methods of treating poor fenestration

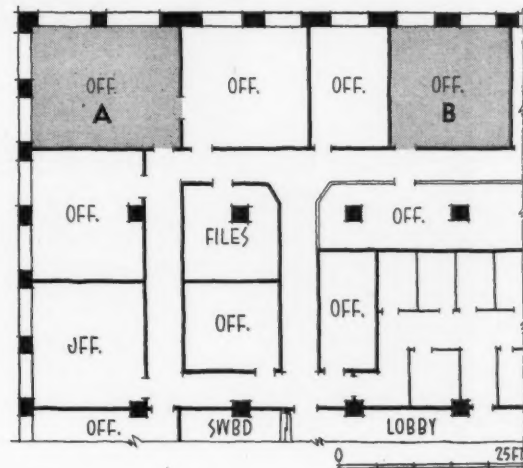
LIGHTING

Natural over-all lighting supplemented with skylight-type fixture

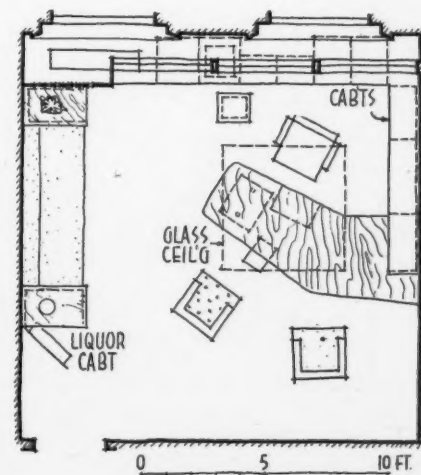
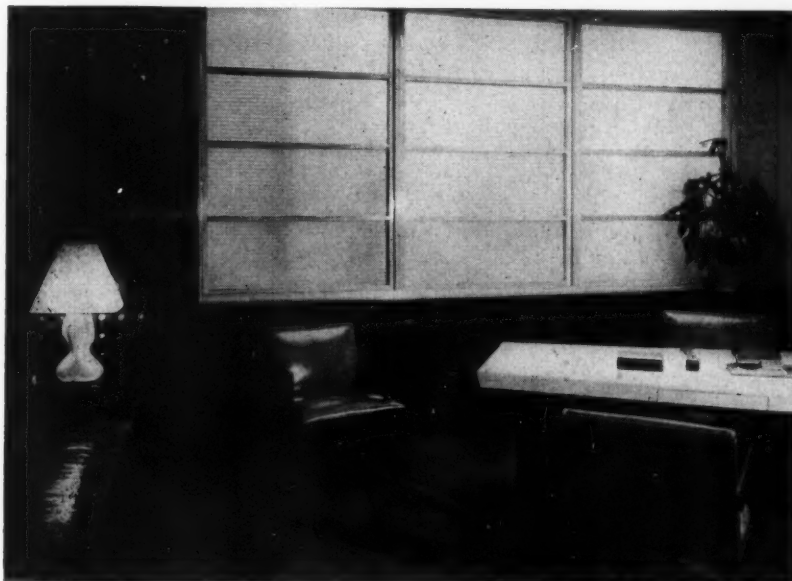
EQUIPMENT

Complex facilities for business, conference and entertaining

OFFICE DESIGN



General Plan



Plan for Office B

AIR CONDITIONING

Central ceiling area furred and used as plenum for perimeter offices

FURNISHINGS

Basic theme incorporated into design of each item

SPATIAL ORGANIZATION

Executive offices surround partitioned central work area



OFFICES FOR A PUBLISHING FIRM

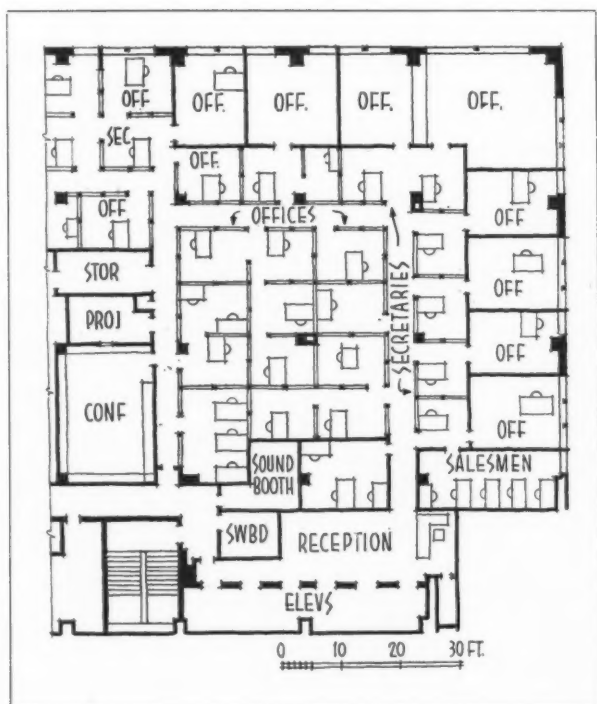
Offices of Henry Holt and Company

New York, New York

Maurice and Joseph Mogulescu

and Gerald Luss of

Designs For Business, Inc., Designers



ESPECIALLY EFFECTIVE LIGHTING is achieved throughout these offices by the use of a combination of indirect fluorescent lighting, incandescent recessed baffle downlights with baffles painted same as ceiling to conceal the source, and direct light from adjustable pulley-type suspended fixtures for desk work. The result is soft diffused shadowless general illumination and pools of warm light at key desk areas.

Clear glass and metal form movable partitions which divide individual offices in the central work area. A flush acoustical ceiling reflects light from low-brightness tubes to give 65-ft candle illumination.

The president's office has an interior adapted to the specific working needs of a publisher. The 20-ft desk is broken by its L-shaped contour.

The receptionist's desk repeats the above design. In all the desks any massive feeling is overcome by a system of suspending the working units and floating the desk surface to give a light airy feeling.

The related color scheme uses muted tones ranging from off-white to warm walnut.



Above: Combination library and conference room. Standard steel shelves hold firm's first editions. During conferences sliding walnut panels hide books. Back of one panel is a film projector, and on opposite wall a recessed screen. At right and below: President's office with desk-conference table which houses working equipment



Ben Schnall



DUAL REQUIREMENTS

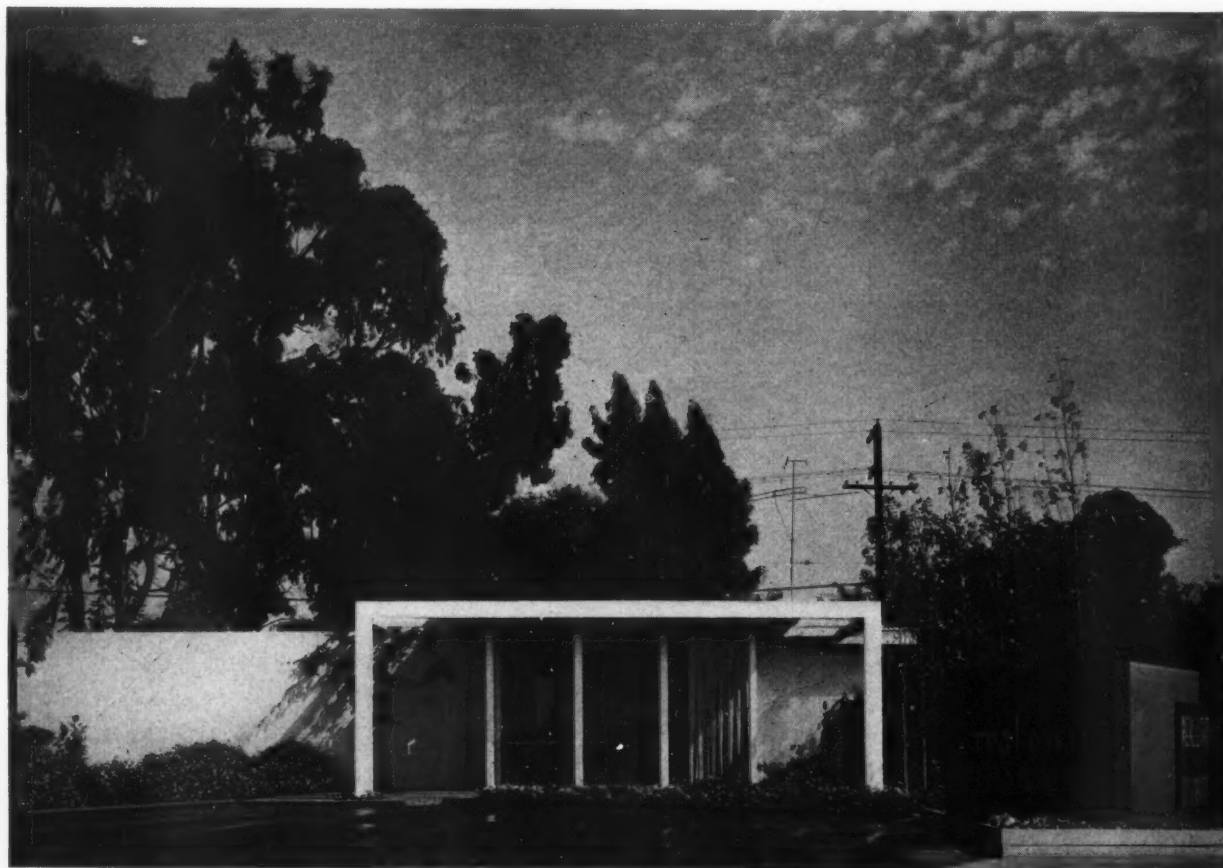
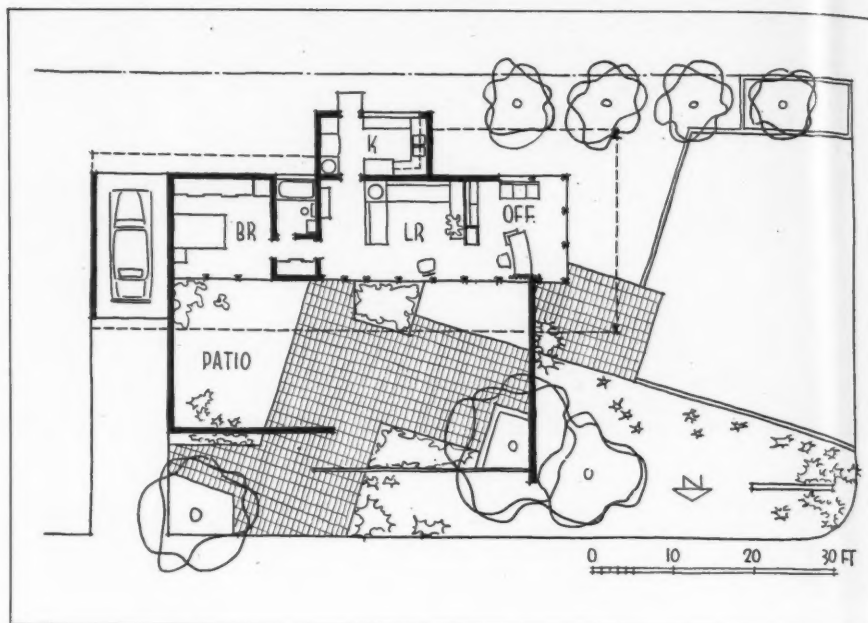
*Accessibility for business, seclusion
for private living, parking for both*

INTERNAL CIRCULATION

Home and office can be kept entirely separate

STORAGE

*Home storage concentrated on outside walls
Office storage in dividing wall*



Marvin Rand

COMBINATION OF HOME AND OFFICE

The Baird House

Edward A. Killingsworth, Architect

Los Alamitos, California

THE PROBLEM HERE was to provide living quarters with attached office facilities for a middle-aged couple who have a small real estate and insurance business. Primary function was living. Budget was a basic factor in the design. The resulting modest structure has much to recommend it — graceful distinction of design, integration of business and private living, simple yet adequate technical details — all on a tiny plot of land and built at rock-bottom cost.

The view from the highway shows the attractive business facade and short stop parking facilities, yet gives no clue to secluded areas for family living. Walls are citron yellow with white trim, face of parking curb and sign are painted grayed turquoise.



Indoor-outdoor views of patio, living room and office



ILLUMINATION

Courtyard used to expand window areas

PARTITIONS

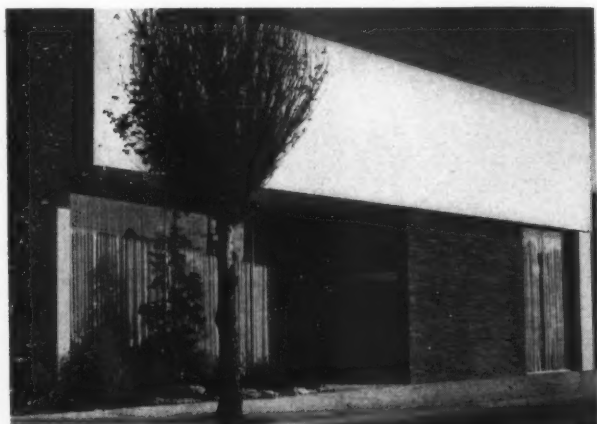
Interesting use of glass to borrow light

OVER-ALL INTEGRATION

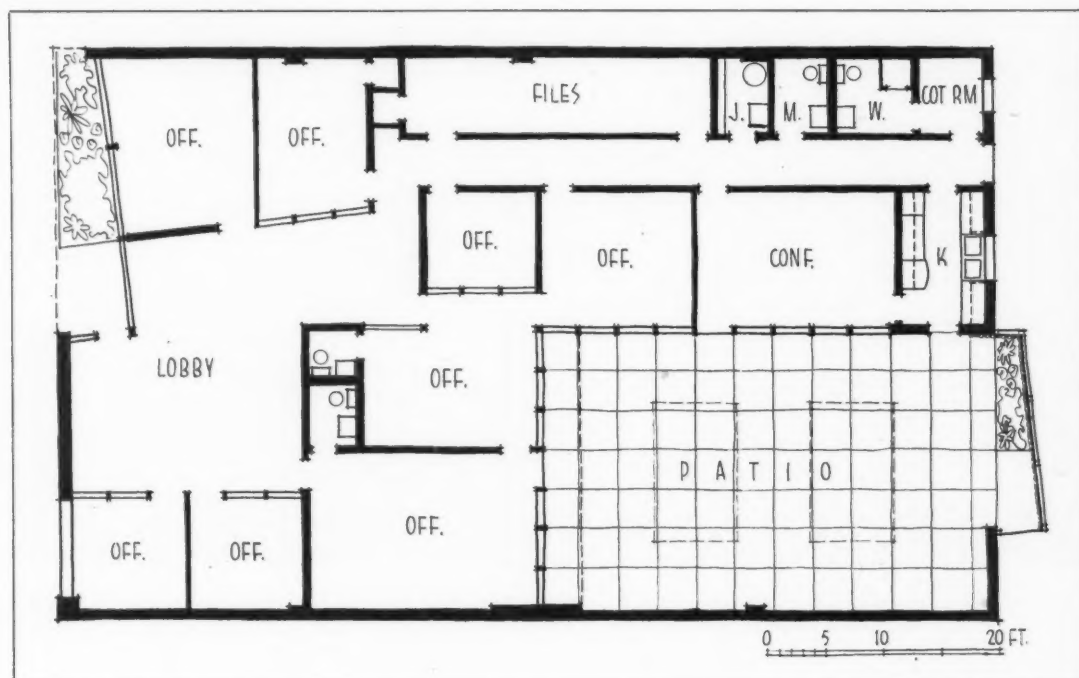
Entire design, exterior and interior, handled by the architects

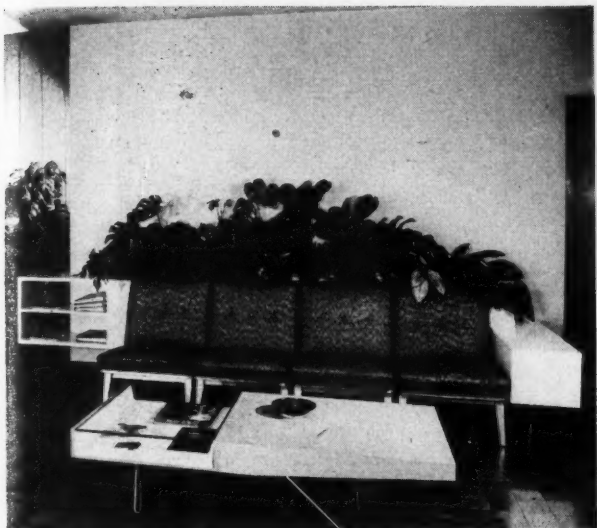


SMALL OFFICE BUILDING ON INTERNAL LOT



THE ELL-SHAPE of this small office building is keyed to the size of the lot. The main concern here was how to get natural illumination into the many separate offices in the building. By planning all of the offices about the large inside court and using glass areas and glass partitions of all types wherever possible, the problem of trapping and diffusing light was answered. A limited number of types of surface materials on the interior and a careful integration of both color and furnishings contribute to a feeling of over-all continuity.





Regional office for Hilton Hotels

Los Angeles, California

Welton Becket and Associates, Architects

Julius Shulman



Interesting use of frankly exposed, painted conduits and three light fixtures create an abstract pattern. Color scheme: beige carpet; beige and natural tweedy fabric; walnut walls, beams and desk top; wall at left and soffit painted bright green; desk chair covered in teal blue, other chairs in rust





Tree in Forest

Morley Baer

THE INDIVIDUAL IN ARCHITECTURE — *Henry Hill*

THE INDIVIDUAL IN ARCHITECTURE

By Henry Hill

THREE-DIMENSIONAL ARCHITECTURE, as every art, is the result of the individual's expression of his beliefs and convictions; if you will, it is his statement of a philosophy. It is, moreover, an expression of the individual's time. His means of expression grow *from* the needs of the human problem and a given environment. The realized concept is completely interwoven with the individual and his personal thinking. Thus, the work of a creative individual is his handwriting, expressing in some ambition and vanity; in others, the warmth and delight of understanding; in some, harshness and boldness; in others, firmness and grace; in so many, the mediocre; in so few, something that adds more to the integrity and dignity of man.

Few are the great leaders; many participate in, and contribute to, the fullest expression of a belief or an idea; the degree of participation or contribution is the measurement of the man. Each individual has the capacity for the expression of a full life. Who has not experienced



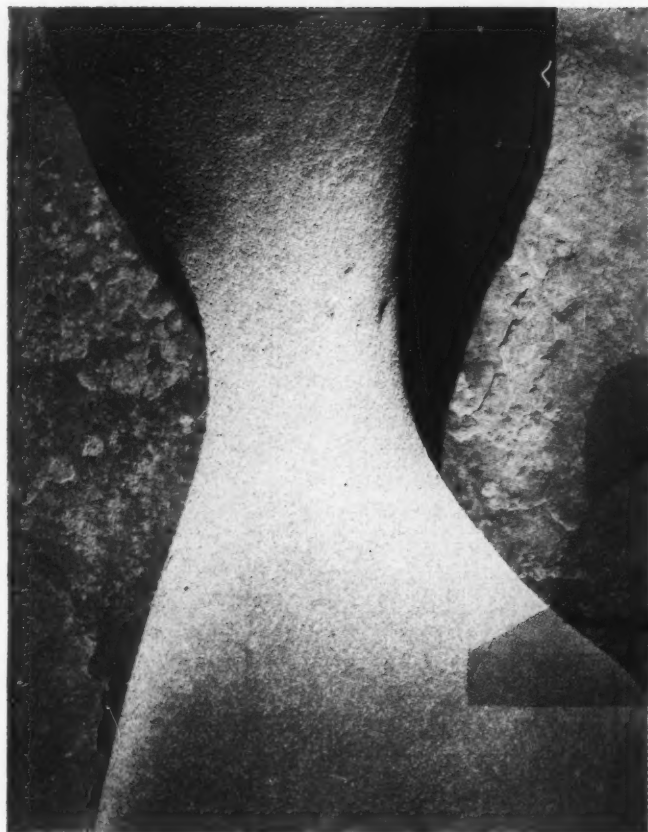
Lily in Ferns

Frances Baer

"And may not a man perhaps burst his bonds asunder? May not his spirit, hidden though it be, break forth, and show such form and color of manliness that we shall say: Here is a new flower . . . a new thing of beauty born of untoward surroundings into a needy world."

— LOUIS SULLIVAN

Is life sustained by man's intellect
or by the very soil on which we live?



Eroded Stone

Morley Baer



Courtesy Albright Art Gallery

Reclining Figure

Henry Moore

THE INDIVIDUAL IN ARCHITECTURE — Henry Hill

the beauty of a child's wonder, and the delight of his world of imagination? In the very short space of one lifetime too many lose much of their inborn capacity to exercise their imagination.

A young student at Stanford University, in telling why he is taking architecture says: "Whether he is conscious of it or not, a man's profession permeates the whole range of his human activities. It is in accordance with the individual's character; his activities become, so to speak, an exalted version of the person himself. Under opposite circumstances, it is like the permanent presence of an unfriendly law. His work can be a dead weight — or life itself."

Eric Mendelsohn has said:

"It is the longing for life, when death is omnipresent;
It is the devotion to truth, when truth is on trial;

*It is the courage of action, when values become stagnant **

That remolds the spirit and redirects the march of man."

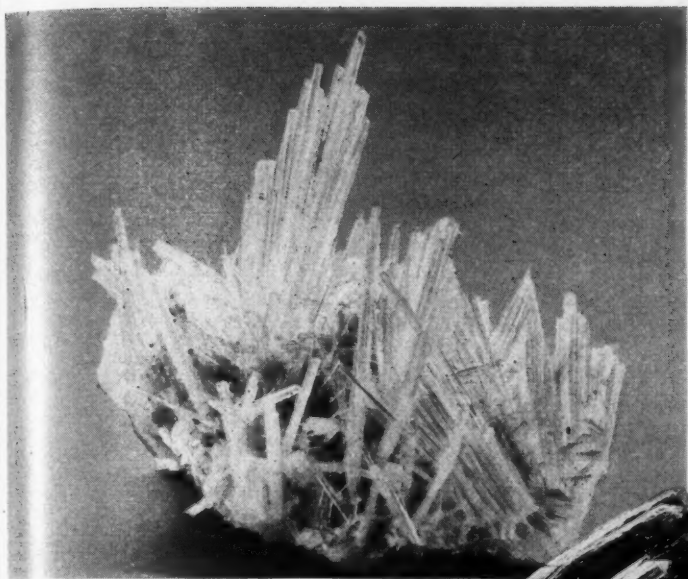
The factual finalities of a three-dimensional concept make clarified decisions a necessity. Every line that is drawn is a decision. Each expresses the individual's knowledge and understanding — his *knowing* — shared with, and having the confidence of, the human being

**Italics the Author's*

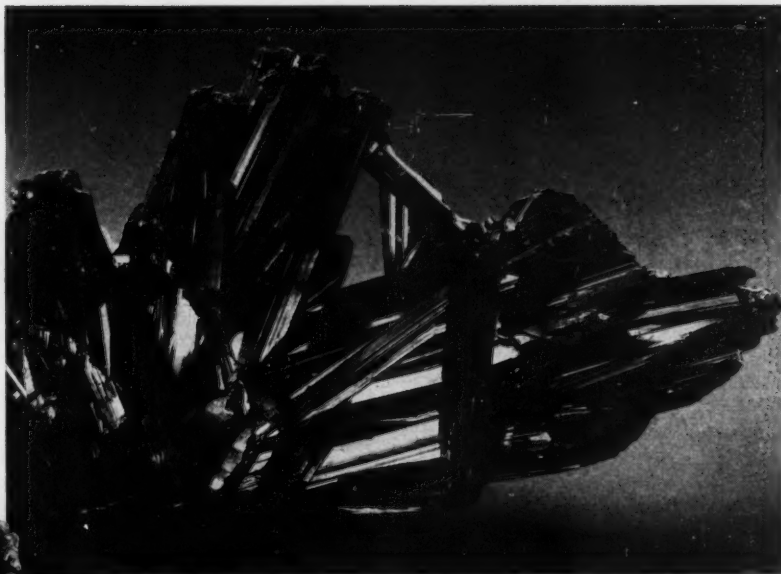
with whom he is working. The individual stands or falls by this knowledge. Through this knowledge and understanding of the world we live in, the history we have known, he can show the way to the future and show it for people now. In the continuity of history of which we are a part, he must, above all, understand the motivating forces which caused the creations of his past. To do creative work, he must reject the vast heritage of the mediocre, and find the true values within the human expressions of the past. He will then realize that these are the values of all men, all times, and all societies.

The individual and his work are a part of society, and if the work is to make itself felt, and count, he takes part in the leadership of that society. He leads through his own thoughts, convictions, understanding and beliefs. This is realized in many ways and techniques. There is an infinite variety in these, but are not the fundamentals the same? External factors and forces may change, but do fundamentals?

The technical knowledge related to architecture or design is but the barest hint of architecture. Has not the creative architect much in common with Beethoven? Does he know and understand what Benjamin Britten is composing today? And is he able to measure the extent of their value? Has he experienced what happens when a



Scolecite from Djupivogur, Iceland

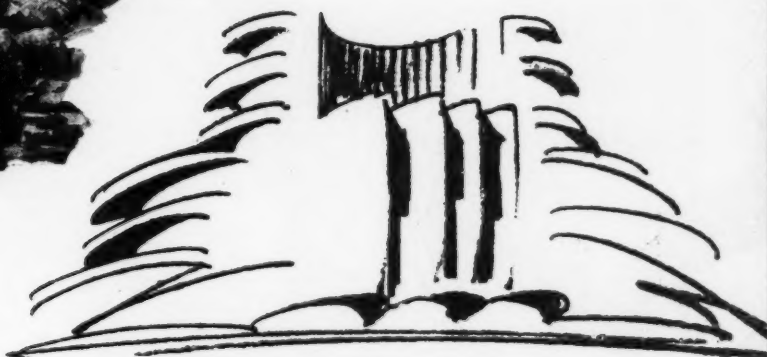


Barite from Cumberland, England

John Jago minerals
photographed by Morley Baer



Stibnite from Iyo, Japan



Bach — Toccata in C Major, by Eric Mendelsohn

Kathleen Ferrier recreates Orpheus? And has he shared the perfection of Toscanini's conducting the Ninth Symphony? Does he know the works of Henry Moore, and the few published words we have been given of his writing? Does he really know Louis Sullivan's Kindergarten Chats, and read all of Frank Lloyd Wright, or Lewis Mumford? Has he read Hershey's *The Wall*, Mann's *Dr. Faustus*? Mendelsohn's *Three Lectures*? Churchill's war books? Certainly not all with complete acceptance, but how can there be a rejection of men's thinking without the knowledge of their experience? Surely there must be a depth of understanding before he can create for the use, living and joy of others.

Understanding is often obscured. Around architecture there is wrapped a blanket of words. Why must there be such verbiage and application of labels — "binuclear, functional, utilitarianism, romanticism, warmth, back to nature, inner content, rustic . . ." In reality, is not this labeling a sign of a basic lack of understanding? Doesn't this only complicate simplicities and result in confusion? Recently, within one week, a national architectural magazine and the *New Yorker* came out simultaneously with an item of utter confusion. The architectural magazine, showing Breuer's home, led off with: ". . . this shows we can avoid easy rustic blending



N. B. C. Photo

" . . . has he shared the perfection of Toscanini's conducting the Ninth Symphony?"



The Fury Michelangelo



God Creating Adam, in the Sistine Chapel, Michelangelo



Cypress Tree

Morley Baer

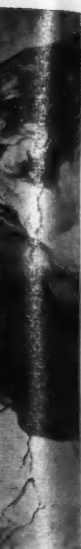
THE INDIVIDUAL IN ARCHITECTURE—Henry Hill

with the ground." (Is it easy? Is it to be avoided?) In the New Yorker, Mumford quotes Breuer as saying that we have learned to blend our buildings with the ground . . . !

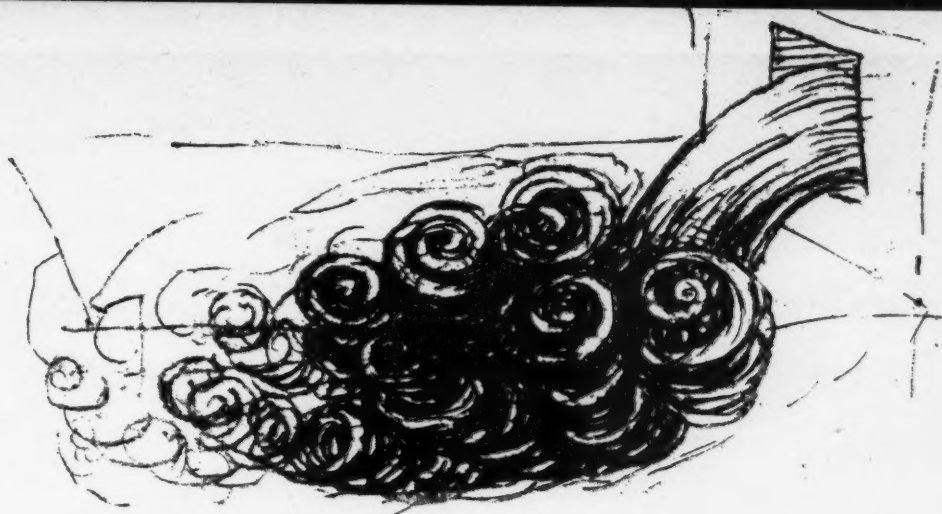
Today, two distinct methods of approach have developed, each based upon opposing concepts. One is the application of a building *to* the site; the other, its organic growth *from* the site. The first expression has a tremendous appeal to the intellect, but I believe that the individual as a human being is lost and forgotten. Within the physical environment of our cities where conditions are, in fact, already applied, there is a certain justification for this approach, *if* the conditions are recognized and understood.

The second expression, growth *from* the site, is by its very nature an integral part of the development of the human being. To what extent this can be realized is a matter of understanding and degree. Within the basic fallacies of our cities, the degree can be large or small, depending upon the conditions. But even when a larger concept is possible, can we maintain integrity to ourselves and to all men by just accepting the fallacies without showing how to overcome them? Is the "application to" still necessary? Are we not here to express our hopes and beliefs? Is life sustained by man's intellect, or by the very soil on which we live?

It is within us, and our concept of true values, to create for and with man.



ngelo



Spirals Formed in Water

Leonardo da Vinci

"... in this the eye surpasses Nature, inasmuch as the works of Nature are finite, while the things which can be accomplished by the handiwork, at the command of the eye, are infinite." *LEONARDO da VINCI*

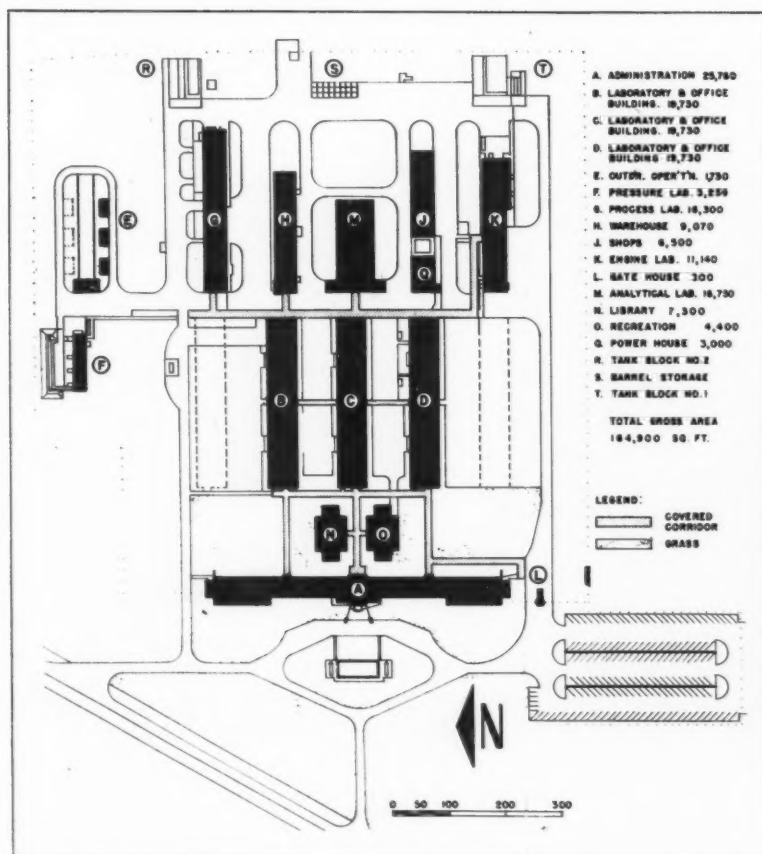
Pt. Lobos Surf

Edward Weston





Kopeck Photo



Rod Daley Photo



RESEARCH CENTER ON THE FINGER PLAN

Research Center for Union Oil Company of California, Brea, Calif.

Austin, Field & Fry, Architects

IF THIS doesn't look much like the customary research laboratory, well, it isn't. It makes some rather radical departures, in concept and in design. In part these ideas came from study of the complicated requirements for research and testing of gasoline and oil products, partly they came from a daylighted concept of a laboratory, not unlike that of an elementary school.

There are fourteen separate buildings, comprising a research center for a host of widely different types of both basic research and product testing, ranging from petrochemical analytical projects to testing fuels in actual engines. Thus the chemical laboratories are about the only typical quarters; the others are all designed to varying requirements. These different requirements, plus their varying hazards, dictated a scattering of the several buildings. Perhaps it was natural, then, to de-

velop a one-story, finger-plan scheme for the chemical laboratories as well as the others, and to develop the daylighted form. At any rate, these buildings look not unlike schools, and the typical laboratory unit, like the classroom, uses a roof sloping upward toward the north light, with sunshades and vertical louver wall continuations to control glare and sunlight.

Service piping for the long one-story fingers, is run in tunnels (no basements being required) which extend the length of each building. The tunnels are large enough to accommodate a light service truck throughout their length, so that piping changes can be made as easily as possible.

All buildings have reinforced concrete walls, floors and ceiling beams. Buildings are air conditioned; chemical fume hoods have separate air supply and exhaust.

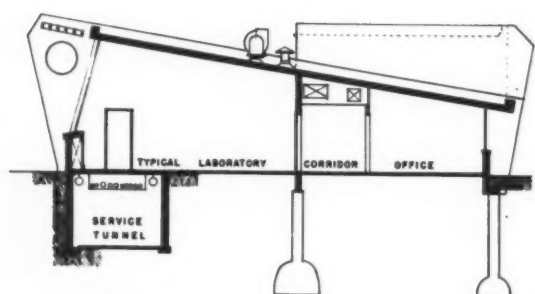
Research Center comprises fourteen buildings for widely different types of study, from analytical petrochemistry to tests of fuel in engines. Library is separate building (photographs at right)



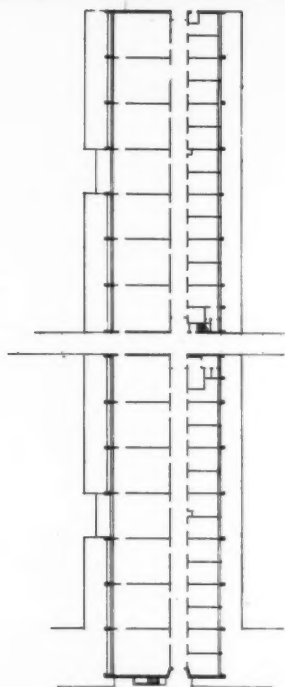


Rod Daley Photo

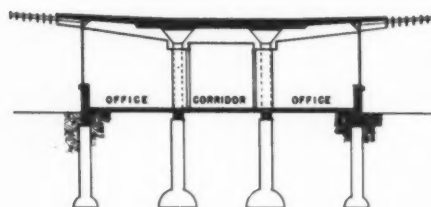
In plan most of the buildings are quite individual, but these are the more typical ones. Notice especially the laboratory building section at the far left, typical for three buildings



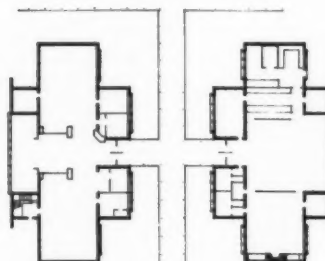
LABORATORY BLDG. SECTION



LABORATORY & OFFICE BLDG.



LIBRARY BUILDING

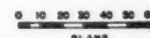


RECREATION BUILDING

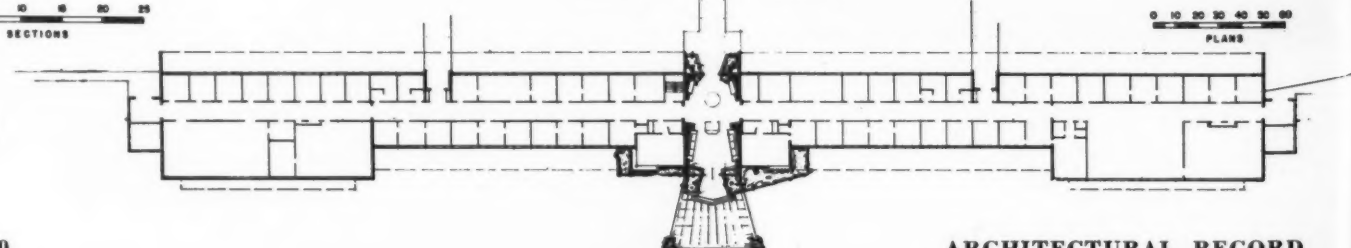
ADMINISTRATION BLDG. SECTION



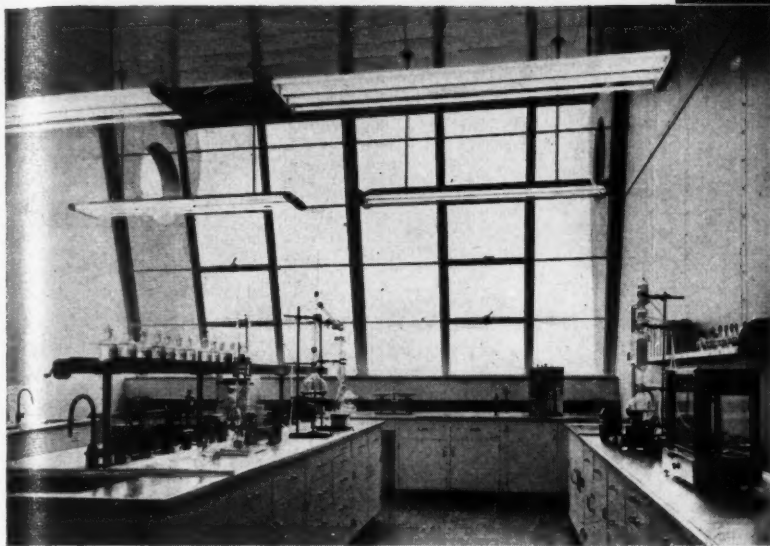
SECTIONS



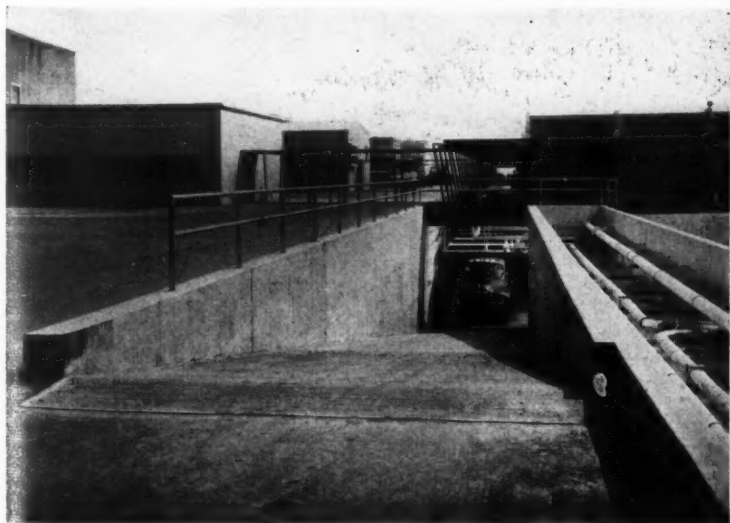
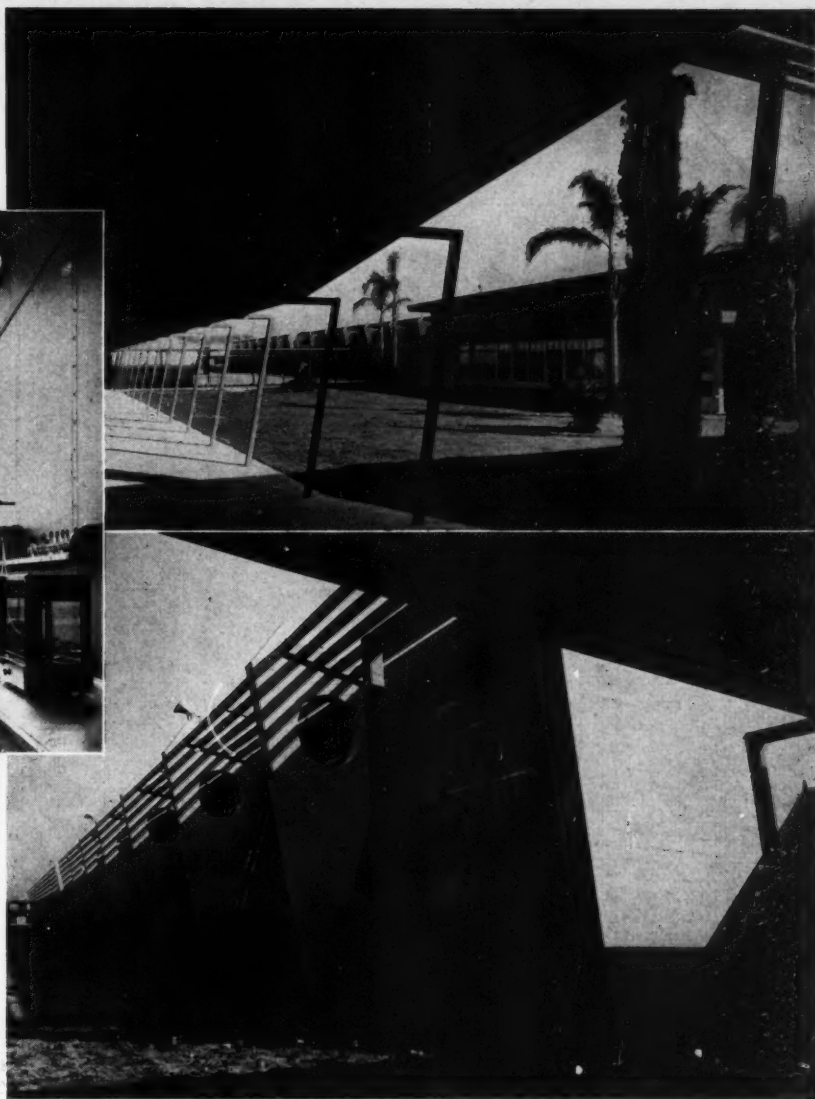
PLANS



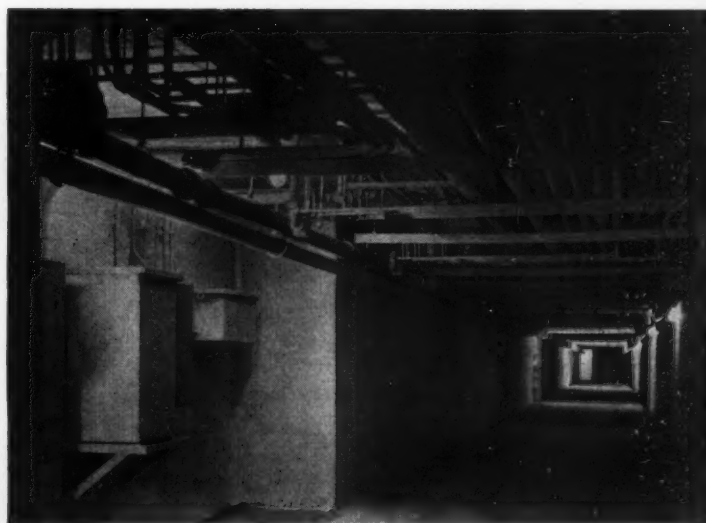
ADMINISTRATION BUILDING

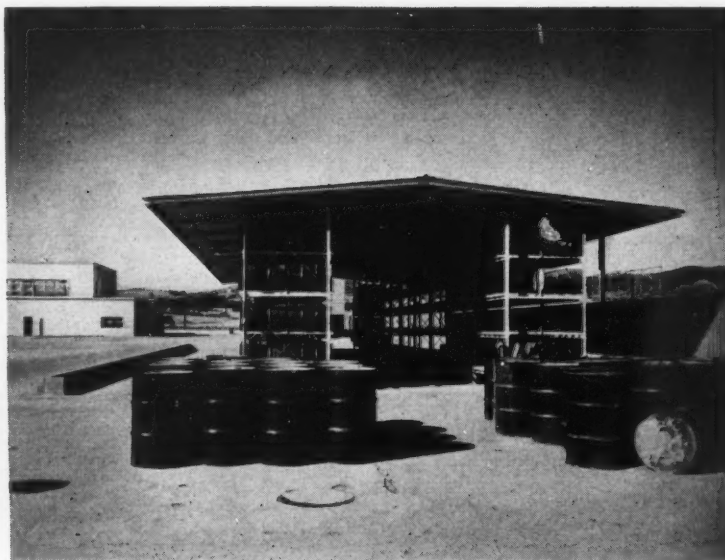
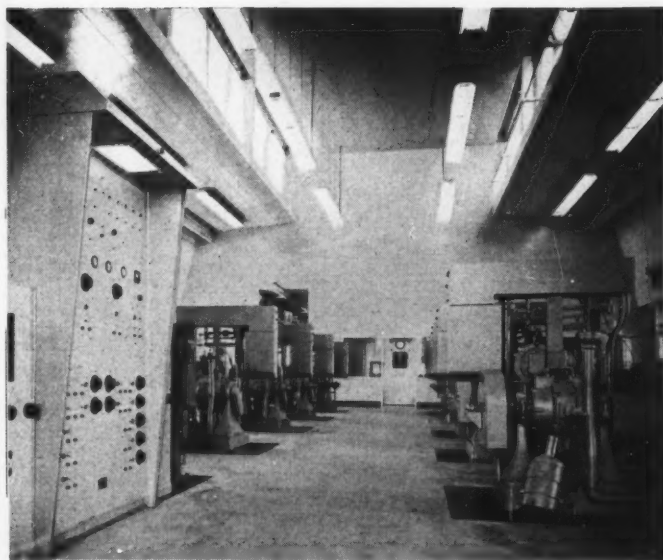
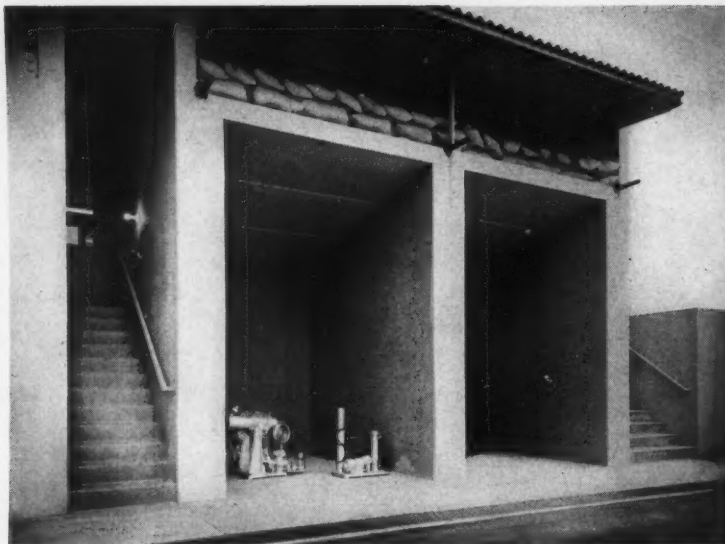


Typical chemical laboratory is designed to make maximum use of daylight, with high north window protected by sunshades and extended walls serving as vertical fins to control glare



Service piping tunnels under laboratories are large enough to accommodate a maintenance truck





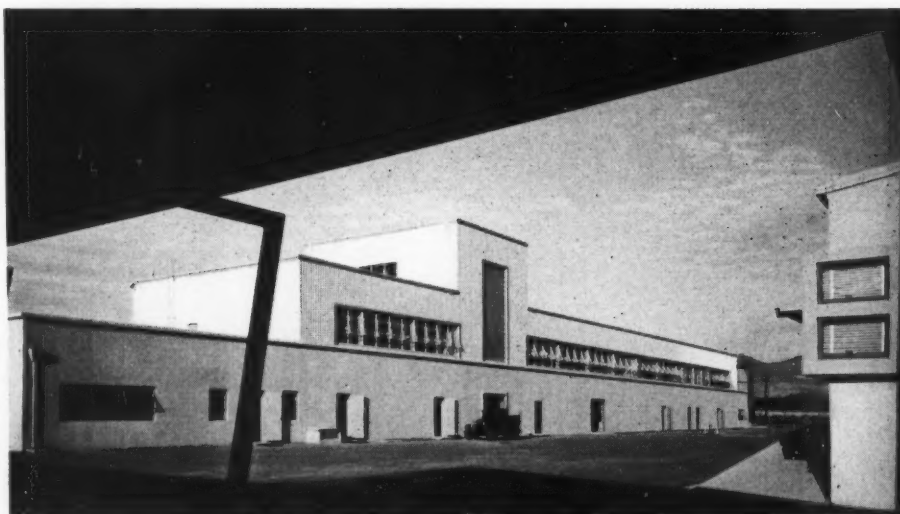
Upper left: south exterior of power house (IQ) and shop building (IJ)

Union Oil Laboratories — Austin, Field & Fry

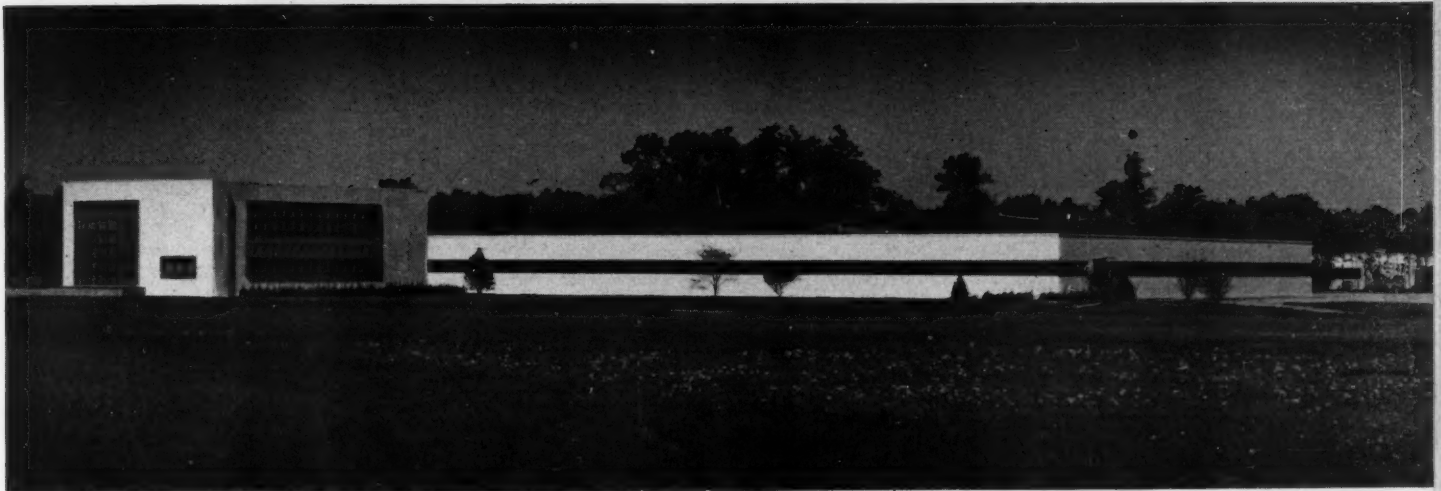
Upper right: north exterior of pressure laboratory building (IF)

Center left: interior of engine laboratory building (IK) for fuel tests

Center right: barrel storage unit (IS)



South exterior of process laboratory building (IG) looking east



Gottsch-Schleisner



RESEARCH CENTER, WITH FAMILY RESEMBLANCE

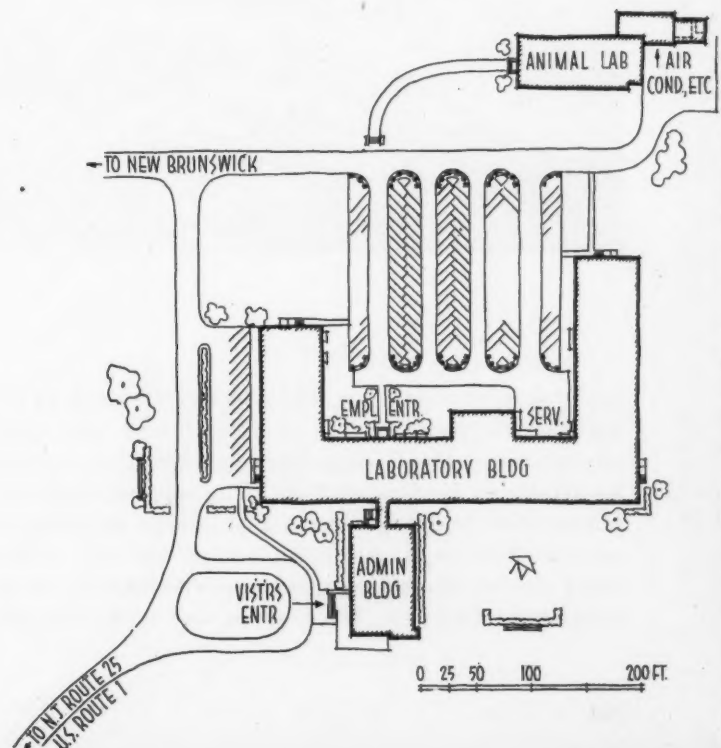
Alexander P. Morgan, Architect

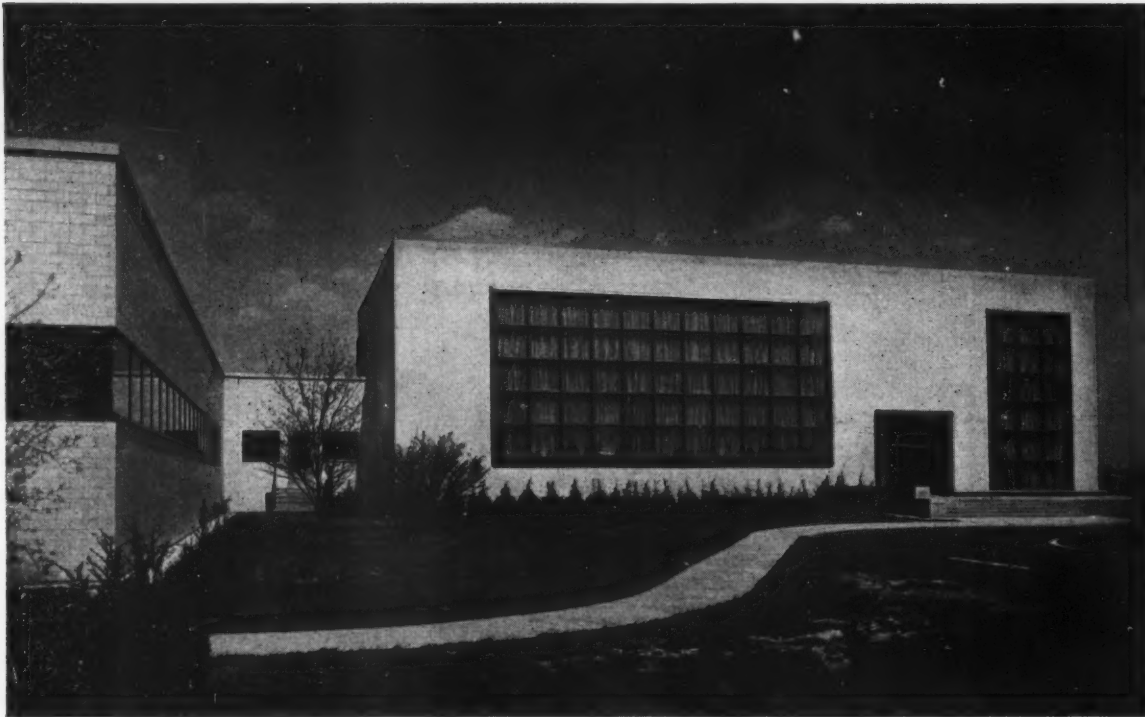
Johnson & Johnson Research Center, New Brunswick, N. J.

Guy B. Panero, Mechanical Engineers

BUILT BY A COMPANY long known for progressive industrial plants, this research center is particularly noteworthy. Its reason-for-being was quite typical — to bring together several divisional research activities which had overgrown scattered laboratory facilities. So the location chosen was near the main plant in New Brunswick, but with sufficient area so that research did not get lost in factory operations.

As in all J & J projects, considerable care was given to appearance, both of buildings and grounds. That was one reason for a long, low building, instead of the more usual several-story building concentrating service piping into shorter runs. In this case, however, while the pipe lines might be longer, general traffic conditions were conducive to the dispersion of a one-story building, for research is divided into several more or less autonomous groups without much inter-traffic. The E form of the





Gottcho-Schleimer

Administration Building was deliberately planned to add a note of monumentality to the center



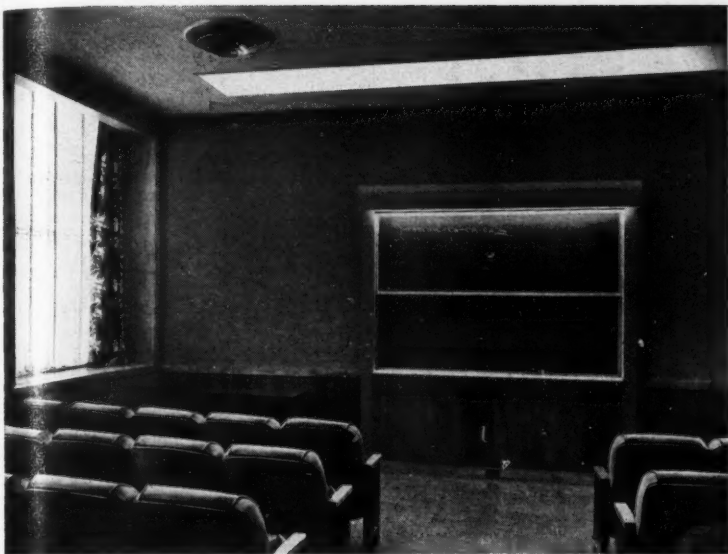
RESEARCH BUILDINGS

building came out of long study, as a compromise in the question of spreading out. Another reason was again appearance — the E shape hides parking areas, keeps an attractive landscaped front. The separate little administration building came out of similar thinking; it gave a visual focus, and it set a desired note — something modern and efficient, between a collegiate and an industrial suggestion. The E shape also works out well

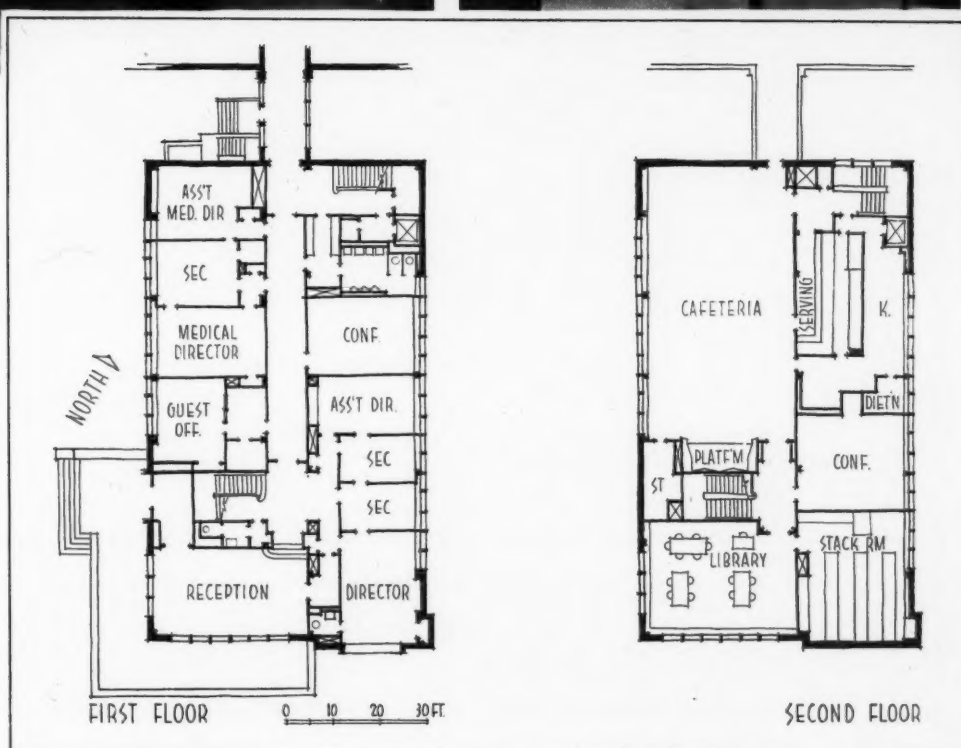
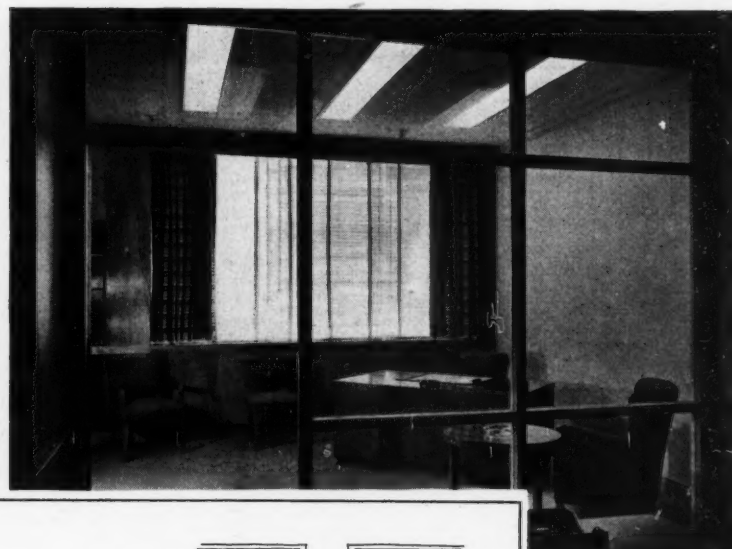
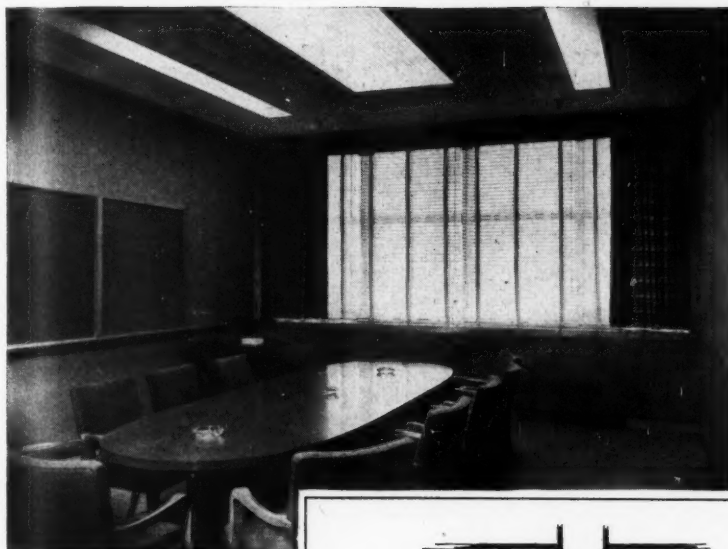
to put the little glass-shelled pilot plant in the center of things, and to provide points for extending wings without disturbance to the principal front.

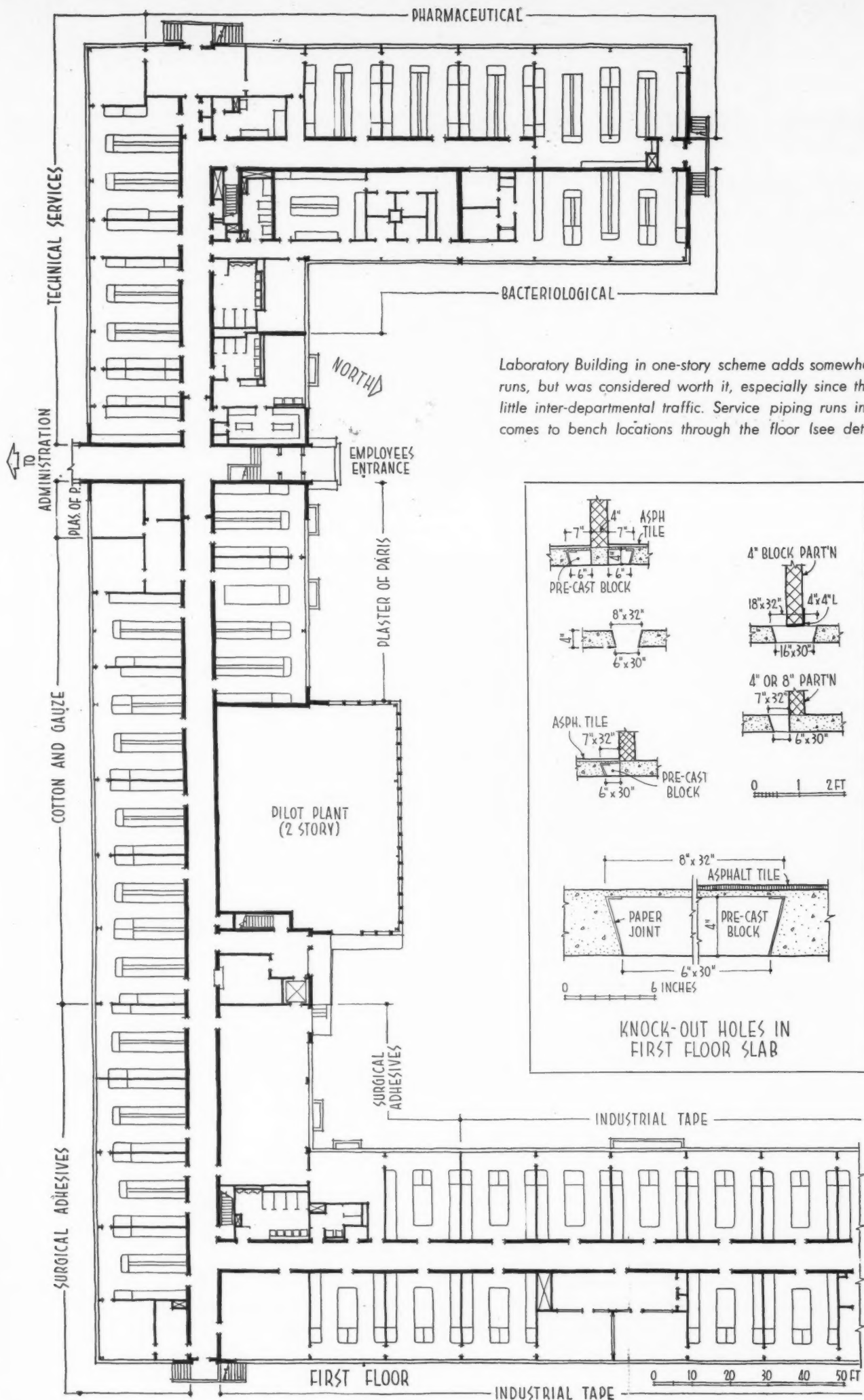
A full basement under the laboratory building serves as a pipe trench, and provides storage, shops, locker and mechanical equipment space. Service piping runs in ceiling of floor below, is brought up through the floor (see details, page 166).

Serving counter (see plan) can be closed off when cafeteria is to serve for formal functions



Administration Building interiors were to have a modern feeling but a certain monumentality also





Laboratory Building in one-story scheme adds somewhat to piping runs, but was considered worth it, especially since there will be little inter-departmental traffic. Service piping runs in basement, comes to bench locations through the floor (see details below)

KNOCK-OUT HOLES IN FIRST FLOOR SLAB

Window area in all laboratories is kept free of fixtures of any kind, and sills are sloped to discourage any use of sill space, all to keep building from having a cluttered appearance from outside. Windows are for outlook, not for daylighting



Gottscho-Schleisner

RESEARCH BUILDINGS



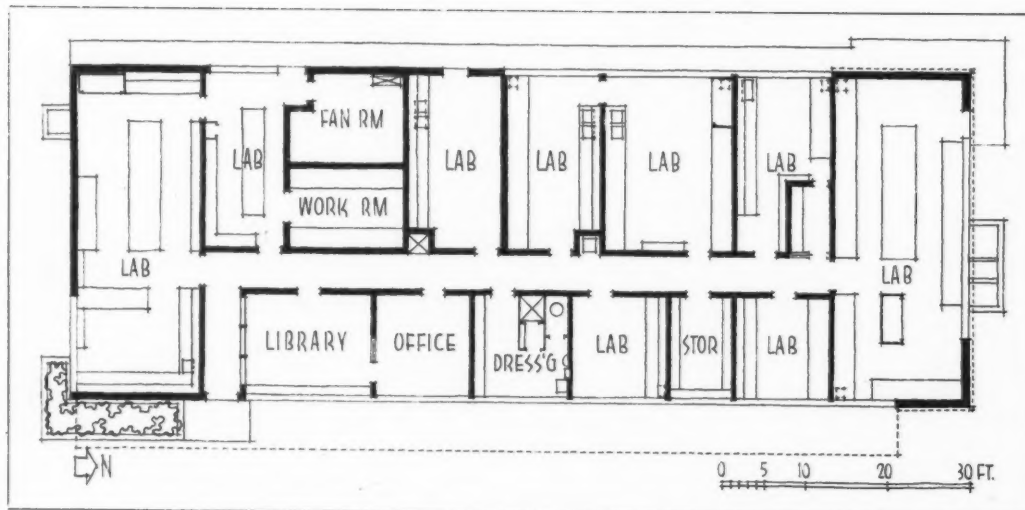


Douglas M. Simmonds



Piping connections to laboratory benches run through a tunnel, six ft deep, under the building. Tunnel is accessible at both ends, and makes possible easy changes in any service connections. Although fire hazard is not especially high, safety measures include emergency shower, fume hoods with sparkproof fans and remote controls

RESEARCH BUILDINGS





SMALL LABORATORY FOR OIL-WELL RESEARCH

General Petroleum Corporation Laboratory, Los Angeles

Welton Becket and Associates, Architects

THIS MODEST LITTLE LABORATORY provides workmanlike facilities for research in connection with oil well drilling, testing cores and samples, to determine how fast and how much a certain well might produce. Except for the larger laboratories at either end, the building follows the off-set corridor scheme; with offices along the

narrow side, piping facilities concentrated in the wider laboratory portion. Rooms are heated and ventilated by a forced air fan system, certain laboratories having floor air exhausts for heavy gases; one laboratory is air conditioned for close temperature control. The Becket firm did all interiors, including even the fixtures.





RESEARCH LABORATORIES FOR ARMSTRONG CORK

Lincoln Highway Near Lancaster, Pa.

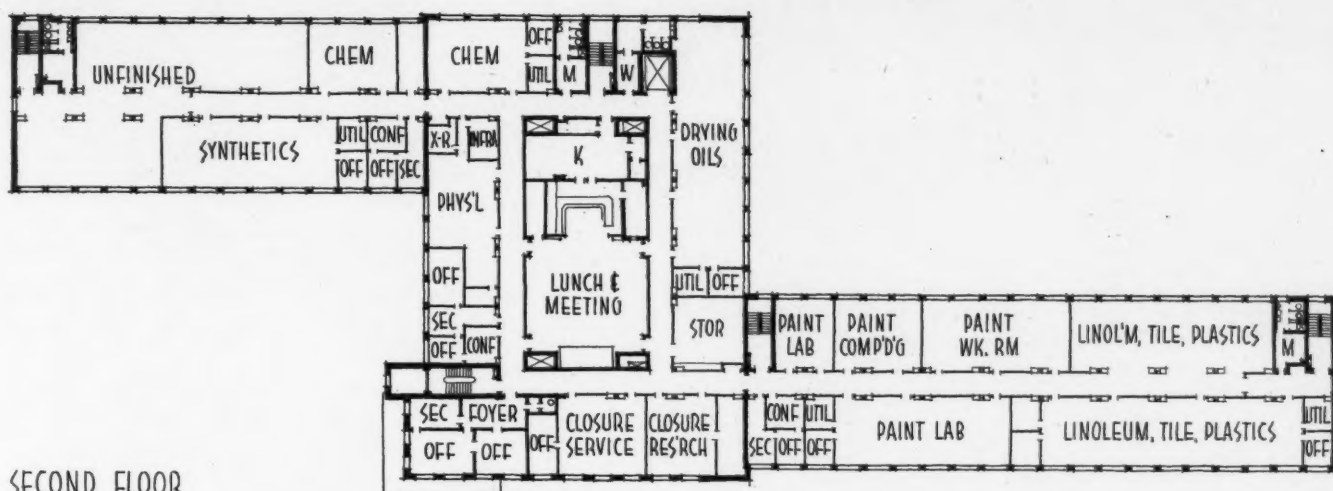
Shreve, Lamb & Harmon Associates, Architects

C. S. Conrad, Jr., Associate Architect

Armstrong Cork's new research laboratories follow a generally typical pattern of one large laboratory building for all research groups, a separate pilot plant, again for all groups. Smaller buildings are for extreme temperature investigations

Cortlandt V. D. Hubbard





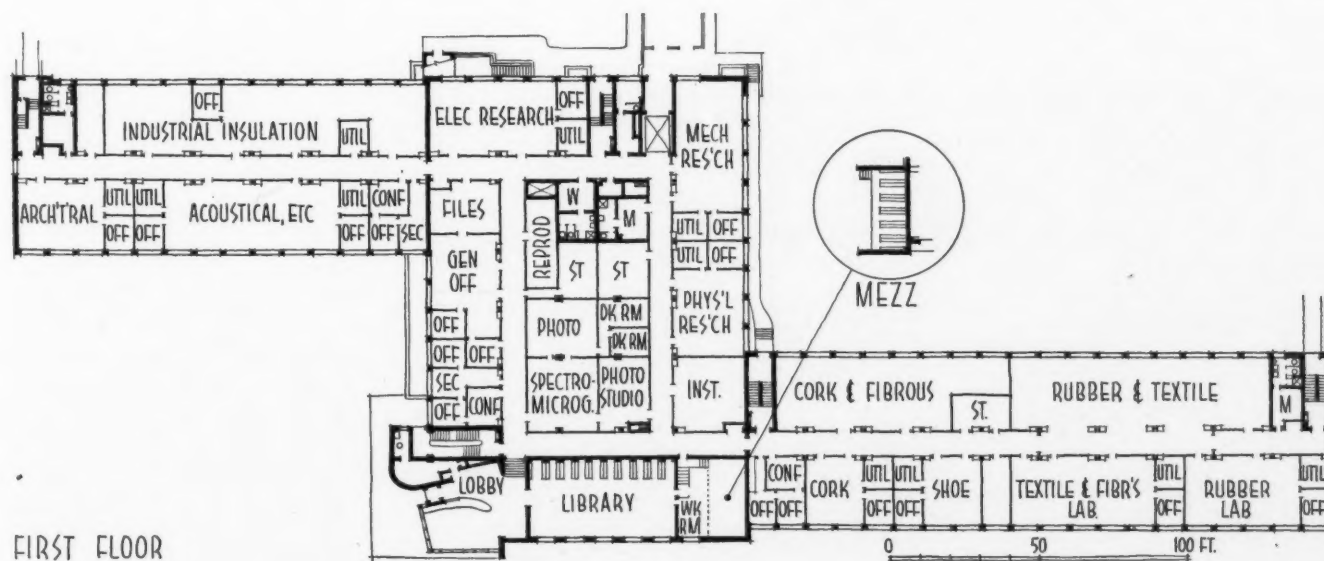
SECOND FLOOR

WHAT WAS ORIGINALLY a "postwar project" — a new idealized research center for all Armstrong divisions — came to fruition this spring. Research had been centralized at Lancaster for many years, but the laboratories had outgrown their quarters in converted office and factory buildings. Now only product testing remains at factory locations; all original research, including pilot plant operations, are newly established in a country location four miles out from the home office.

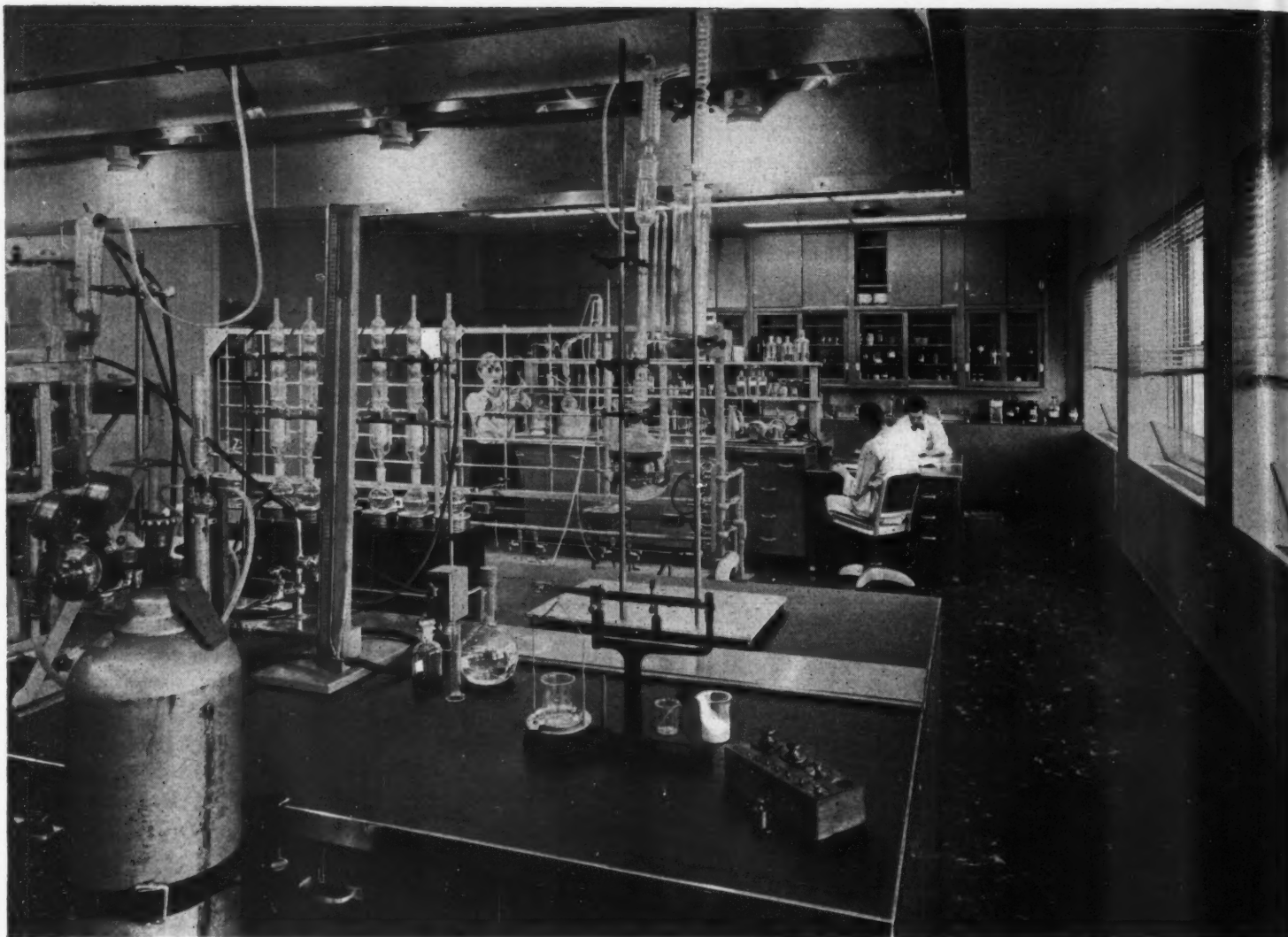
Moving to the quiet location was but one of many questions studied in a lengthy investigation by the architects in cooperation with James Todd Baldwin, A.I.A., of the Armstrong staff. Others included determination of a suitable laboratory module (10 ft was the final decision), immediate and future space require-

ments by departments, and, perhaps most important, development of a system of service piping for continuity of operation and flexibility for the inevitable changes (see page 172). Also, of course, the study of materials that would best meet the objectives established. A test laboratory unit was erected in an old building to try out ideas in practice.

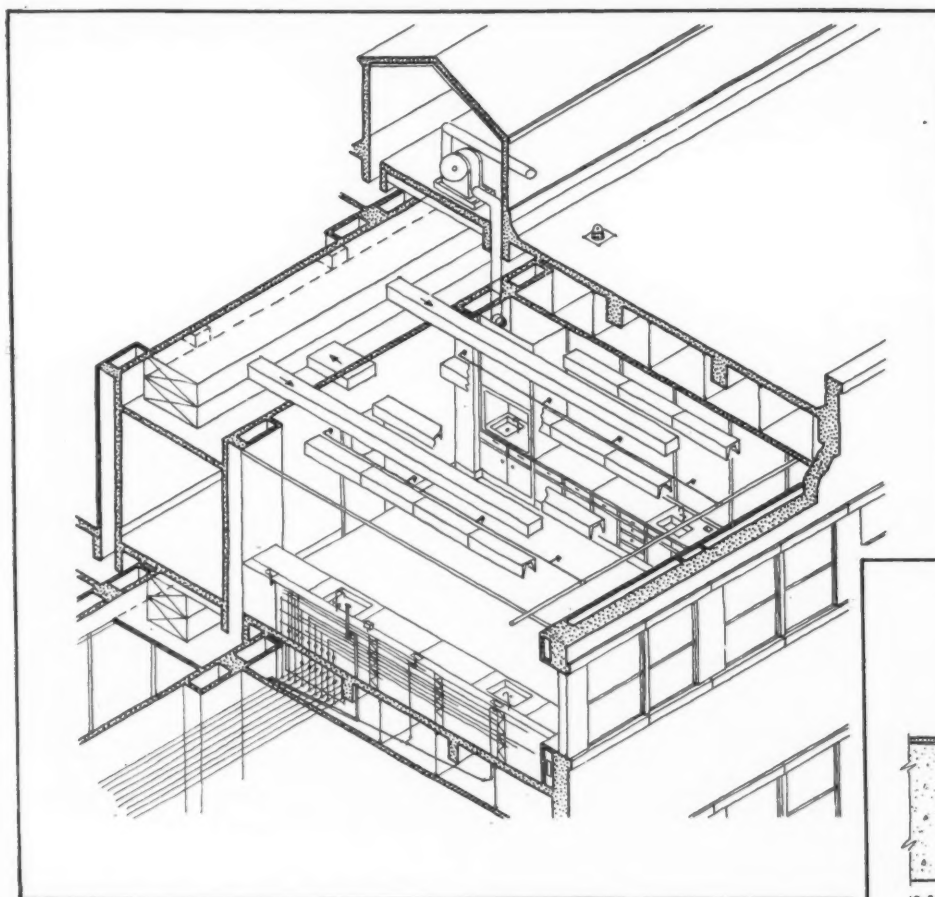
The result is a main laboratory building of two stories and basement, with a large central core (for central services like offices, library, photo and mechanical laboratories, and kitchen and dining room), and two asymmetrical wings for concentrated experimentation. And a separate building in the rear for pilot plant operations, plus smaller buildings for special extreme-temperature experiments.



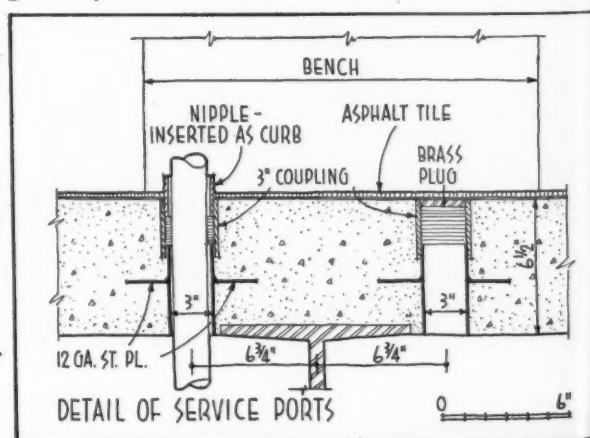
FIRST FLOOR

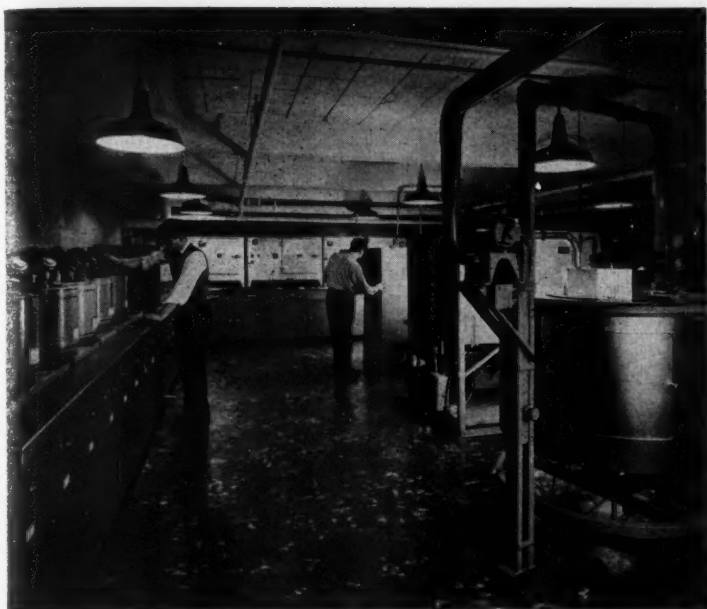


Cortlandt V. D. Hubbard

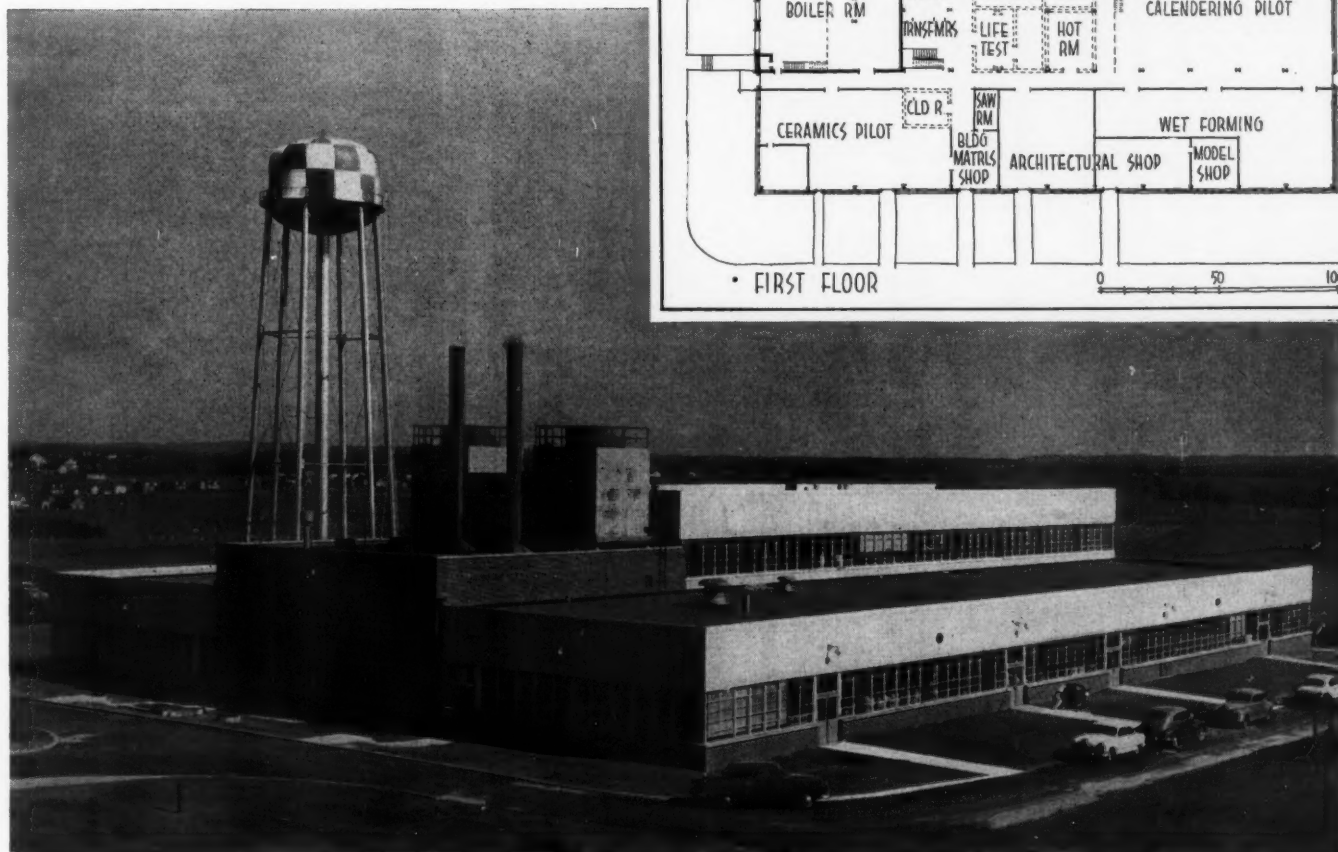
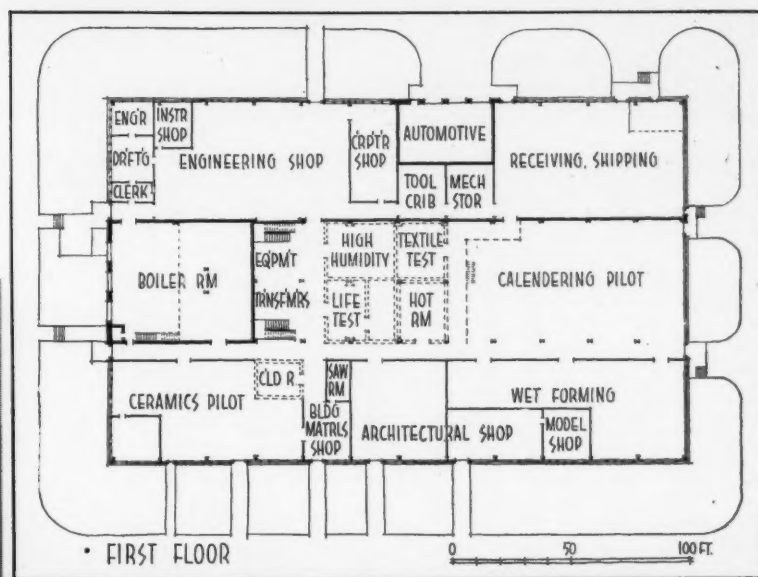


A horizontal system of service distribution was chosen as most economical and flexible. Service mains are looped, feeding in both directions, and valved at every 10 ft, so that piping changes can be made without disturbance to operation. Mains run in the ceiling of the floor below, feed up through pre-set service ports in the floor; ports can be closed if not in use (see detail below)

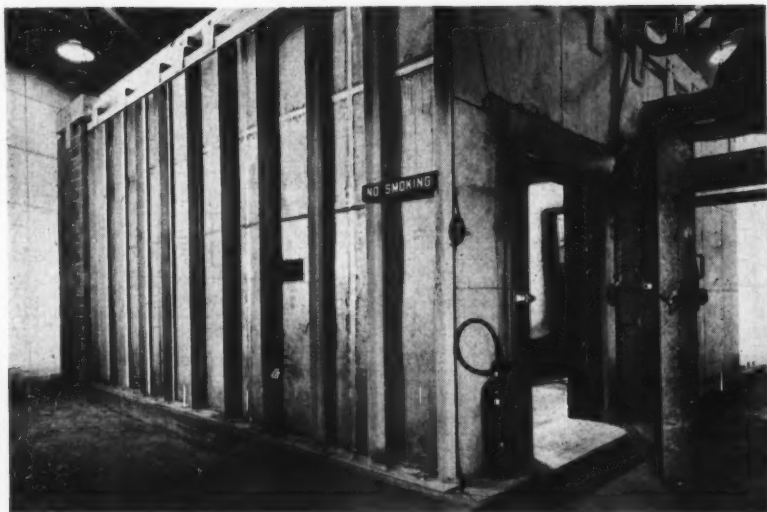
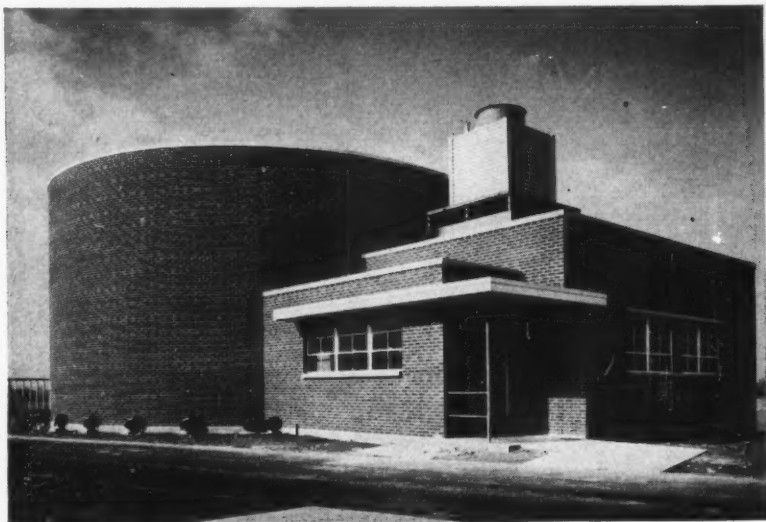




Separate pilot plant accommodates all process tests for the several divisions, also other experiments requiring heavy equipment. Main objective in the plan is flexibility, as frequent changes are the rule in pilot operations



Extreme temperature building (below) for testing products under adverse weather and exposure. The cylindrical form was dictated by exacting air-conditioning requirements



Spacious lobby in the laboratory building (photo strip above) welcomes visitors at grade level, though corridor level is several steps higher. It also manages to exhibit a great many company products

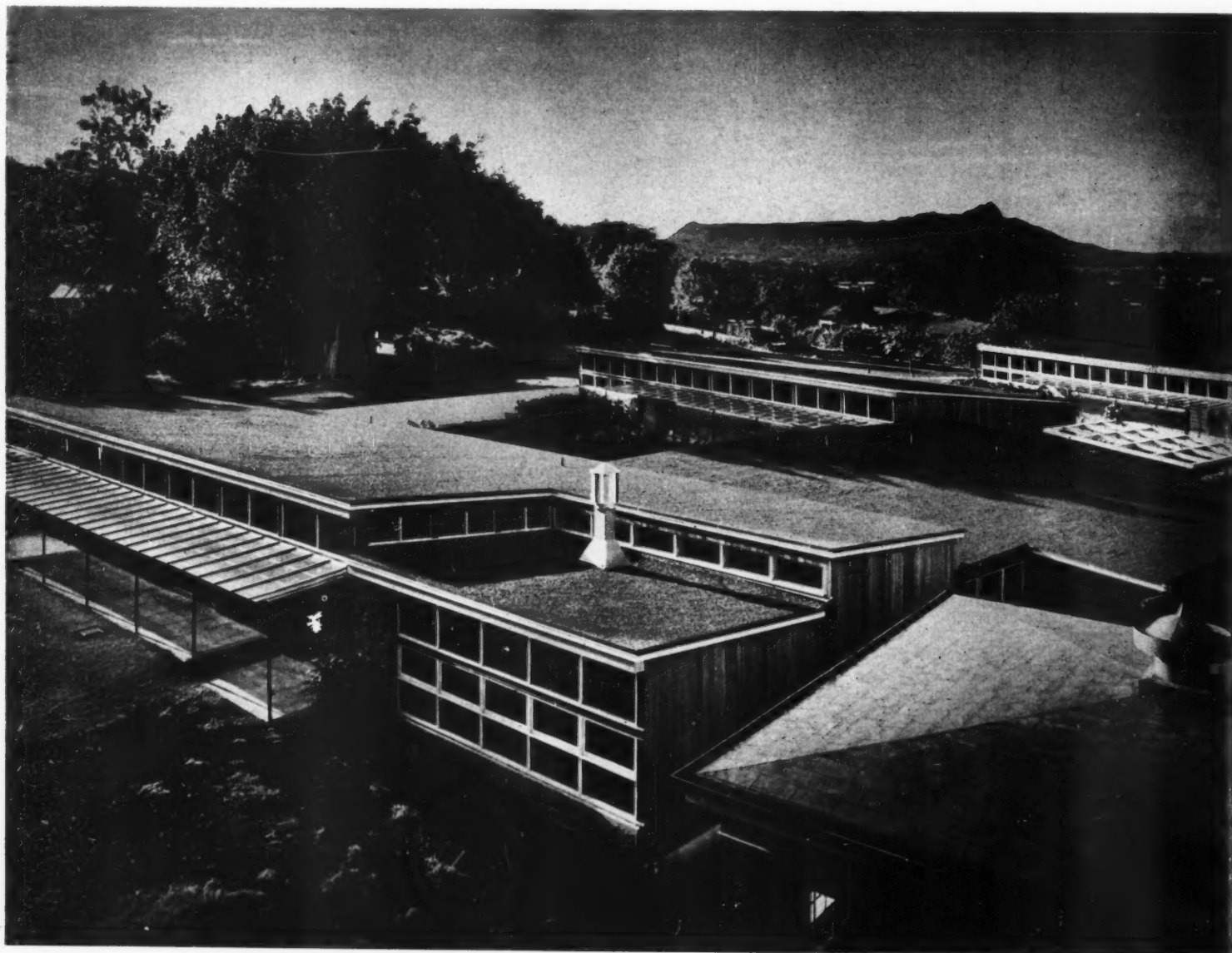
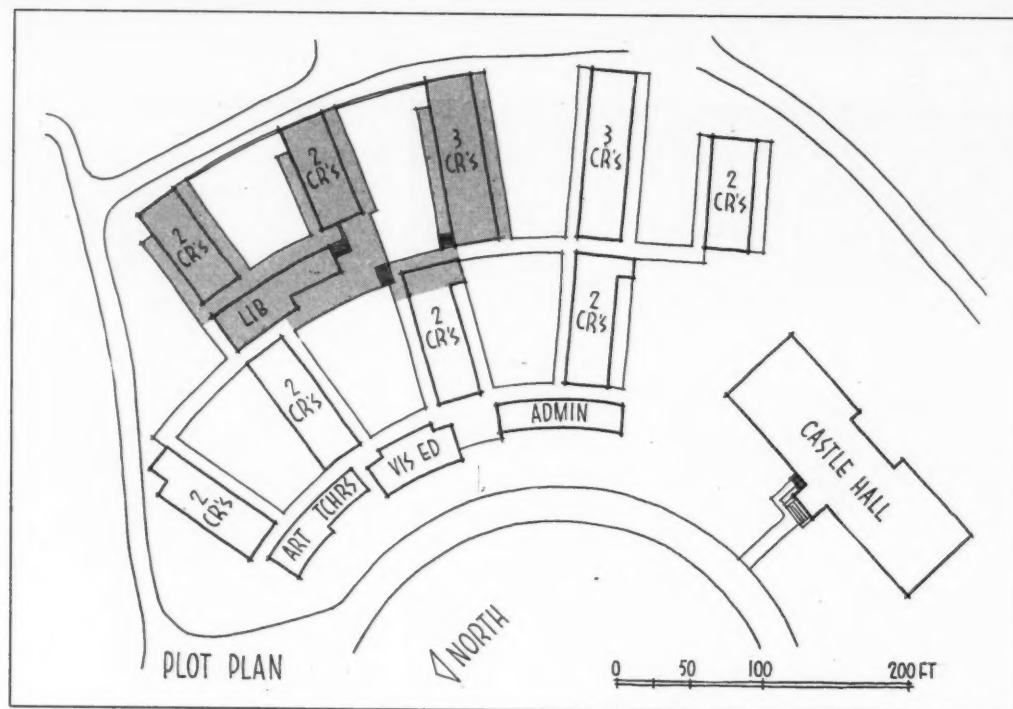


Cortlandt V. D. Hubbard



Library in laboratory section is at ground level, has high ceiling, and therefore accommodates two levels for stack rooms (photo below and across page)





ELEMENTARY SCHOOL IN HAWAIIAN MANNER

Punahou School, Honolulu

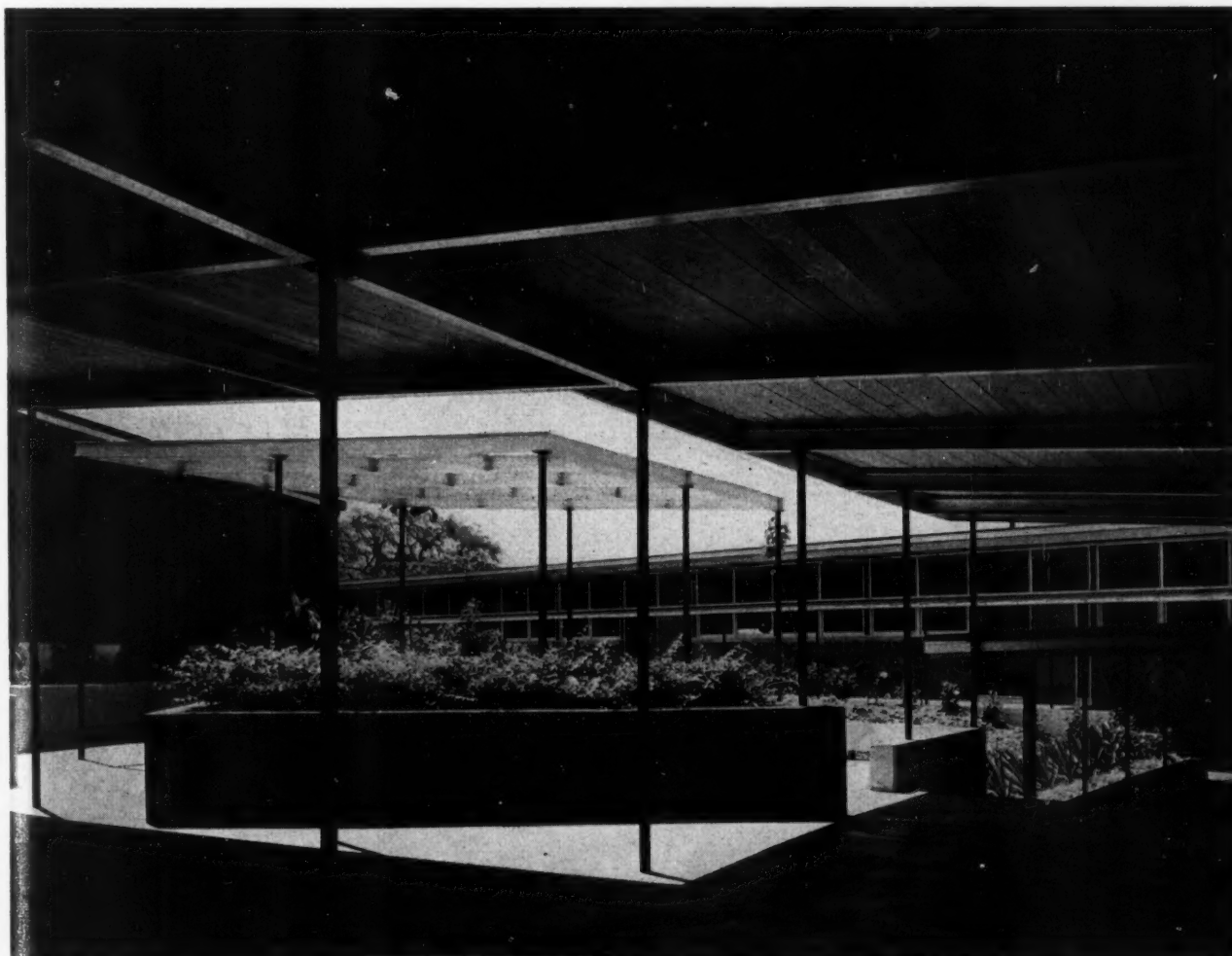
Vladimar Ossipoff, Architect

IN the fabulous land of Hawaii there seems to be a great deal of climate, a great deal of activity, and a similar quantity of interesting architecture. Design seems to express something of the welcome extended by the islands to progress and ideas, also of the gaiety and zest so generally associated with Hawaii. And where are such qualities more appropriate than in an elementary school?

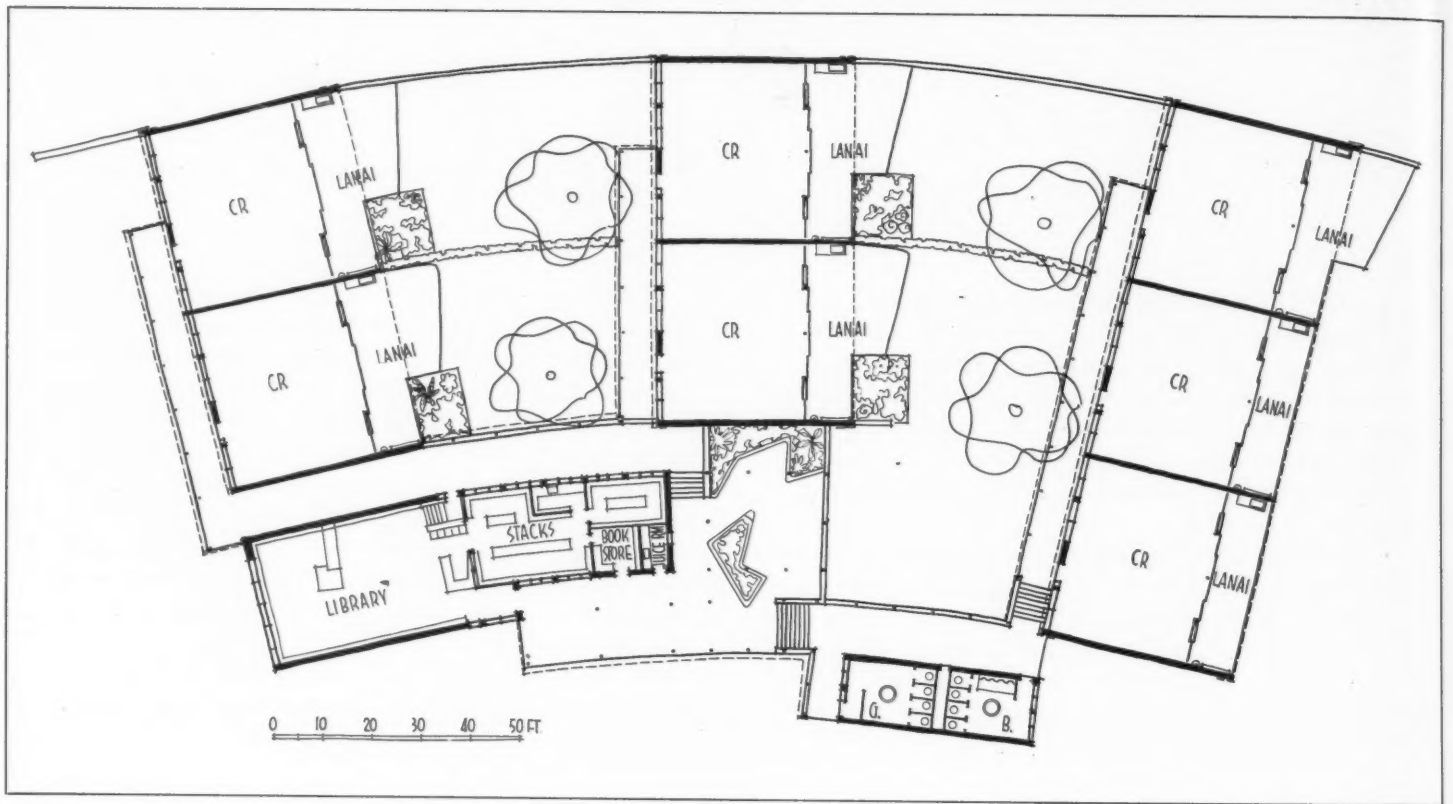
The buildings here shown are but a start on a comprehensive program for the Punahou School. This portion consists of seven class rooms, library wing and toilets in a building to be finished later. When additional funds are available, the existing forty-year-old buildings will be demolished and more buildings erected.

The classrooms are laid out in the finger plan to take advantage of the open climate for outdoor study and recreation areas, with single outdoor corridors, but with plenty of provisions for shade and for protection against heavy rains. Corridors, running generally along the north side, are roofed over with obscure glass, allowing north light to enter the windows below the roof. Windows above the roof have fixed sash, as this side is exposed to the wind and rain; sash below the glass roof swing in for ventilation. Additional ventilation is obtained through the screened soffit of the eave.

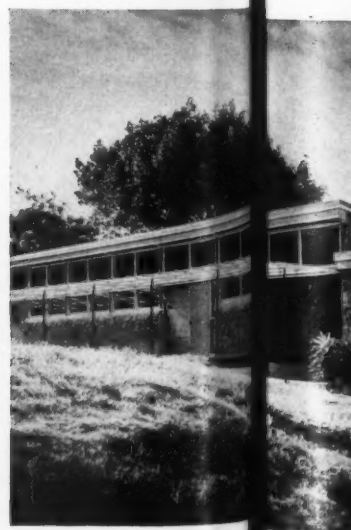
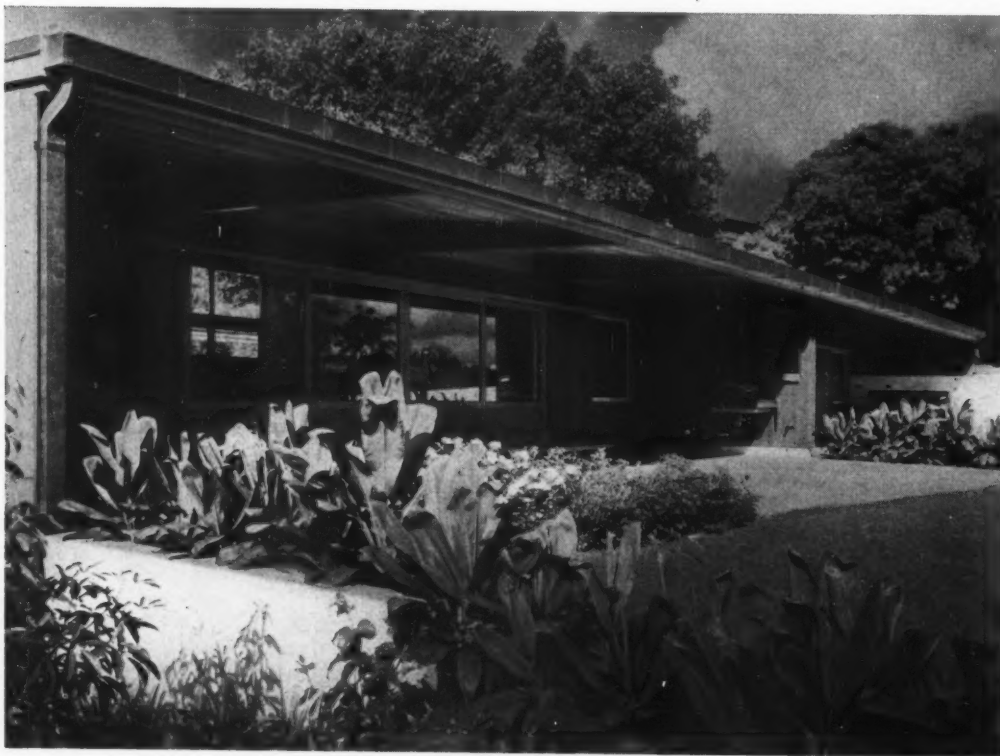
The steel arbor seen in the court view will support a spreading Hau tree, which soon will provide shade.



R. Wentom



R. Wenkam

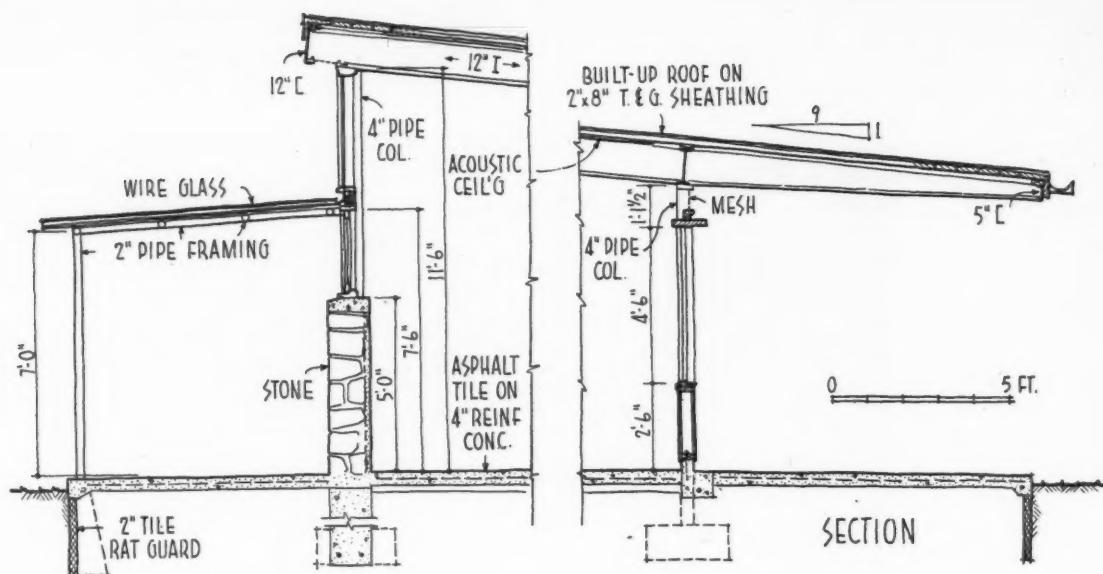


Library is fairly large, yet manages to maintain intimate scale and the typical open quality. Fireplace open on four sides sends warmth in all directions on damp days



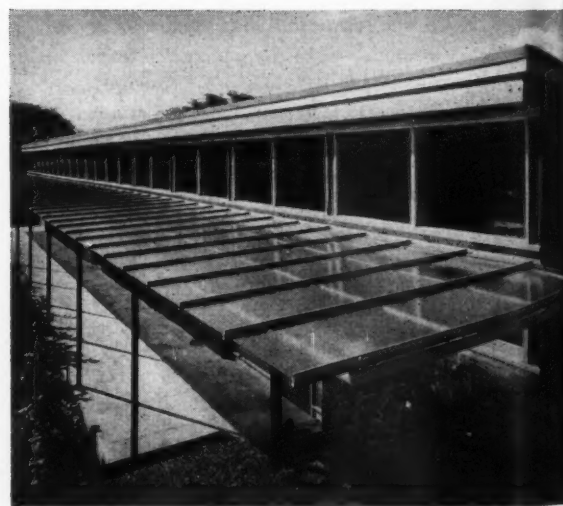
Glass roofed corridor on north side, wide overhangs on south side give protection against wind, rain and strong sunshine, make outdoor space useful no matter what the weather. Sliding doors open classrooms to outdoors. Planting is extensively used for screening as well as for color and visual interest



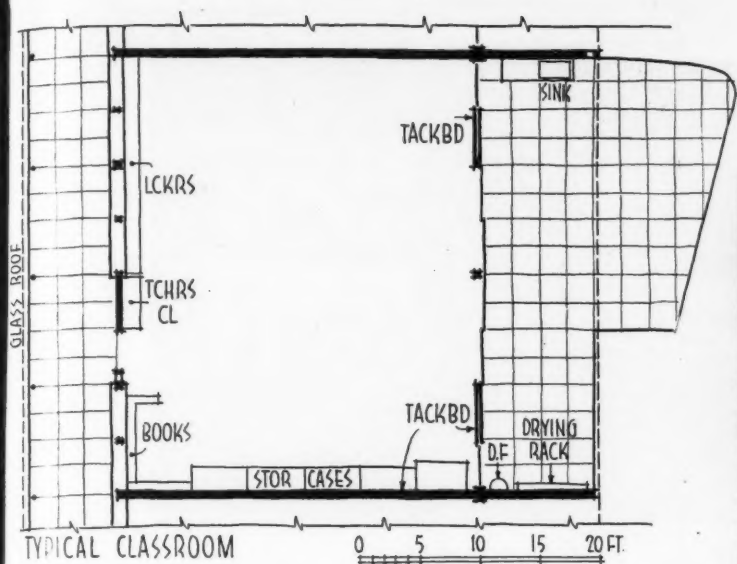


R. Wenkam

Structure is exposed steel framing supported by pipe columns. Exterior walls are of gray stone and natural redwood. Steel framing is painted an off-white, pipe columns bright red



Stone wall provides necessary wall space for lockers on north side. Operable sash below the glass corridor roof, and fixed sash above, combine daylighting with weather protection



Classrooms are daylighted from both sides, but with clerestory windows on north side only. Sliding doors permit room to be virtually completely open to lanai on south side





Cortlandt V. D. Hubbard

RESTAURANT PLANNED FOR SELF-SERVICE

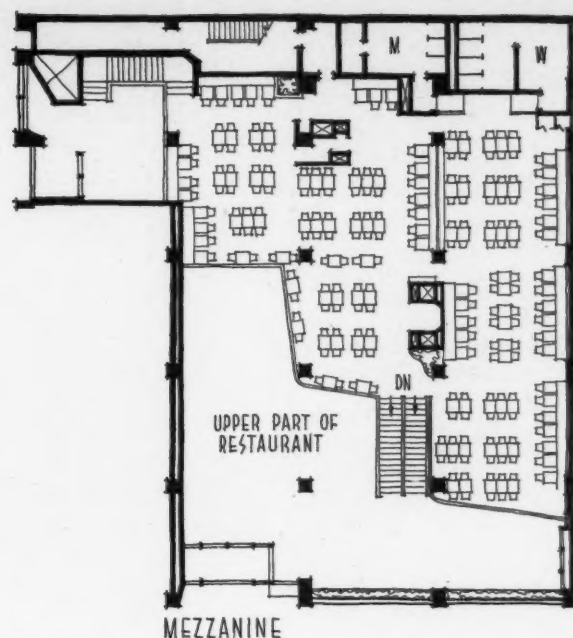
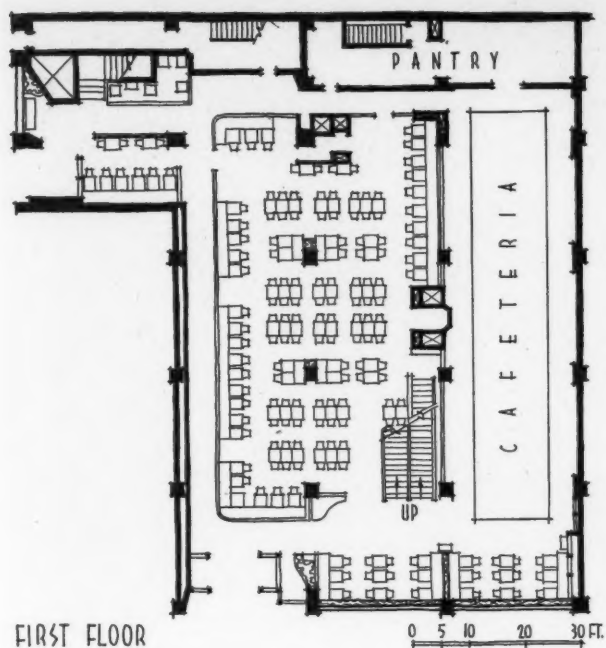
Longleys Restaurant

New York City

Joseph G. Morgan, Architect

Thomas F. Hennessy, Associate Architect





THE PROBLEM HERE was to fit a smoothly working self-service restaurant into an existing building. Located opposite Radio City, the property is L-shaped, fronting both on Sixth Avenue and on busy 50th Street. To accommodate the rapid turnover during peak periods, the service station is an island; customers pass along it on either side, passing checker and cashier at end; each line can serve 10 per minute. The flow of customer

traffic is kept completely out of the dining area.

A seating capacity of 500 was made possible by the introduction of a balcony seating 300. The low ceiling heights which resulted are minimized visually by indirect lighting panels forming a pattern of 8-ft squares. The irregular shape of the balcony and the open railing of plastic tiller rope and steel also help to counterbalance the low ceilings.



**RESTAURANT PLANNED
FOR SELF-SERVICE**



Public areas are covered with a variety of plastics, completely washable, and with warm tones of brick and wood to blend with huge mural by Cobelle on south wall. Stairs are broad and low, balcony rail is open to help attract customers to upper level

Cortlandt V. D. Hubbard





R. Wenkom

DESIGNED TO ATTRACT ATTENTION

Wayne's Associated Service

Aiea, Oahu, T. H.

Wimberly and Cook, Architects

J. Grant Morgan, Structural Engineer

OWNER AND ARCHITECTS agreed at the outset that this service station must be of "eye-arresting design." Located on a main highway near Pearl Harbor, it had to attract attention to compete with several other service stations in the vicinity. Yet economy of construction was a main requirement.

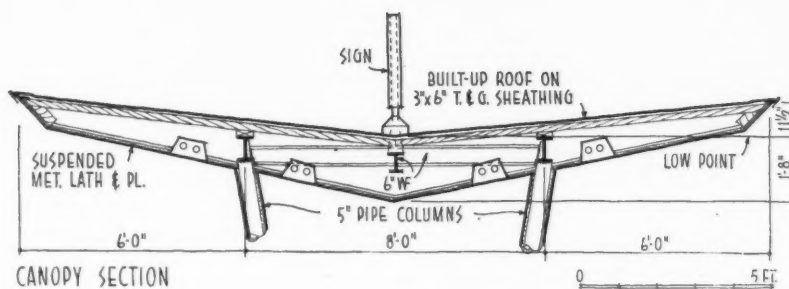
Three major devices were used as attention-getters: a flaring pump canopy, wide open shop and sales areas, and highly unusual show windows (page 187). The

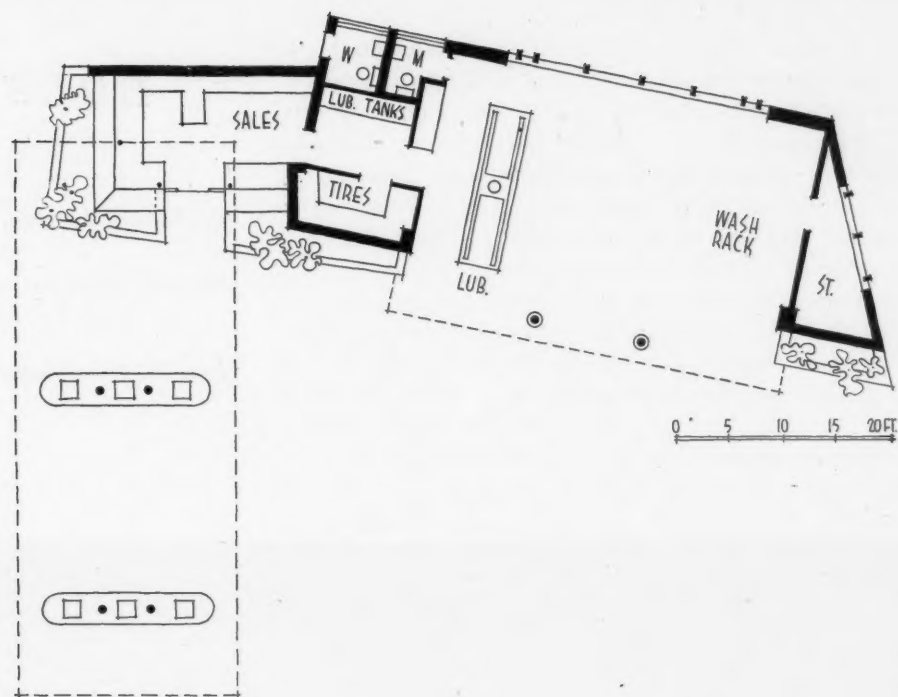
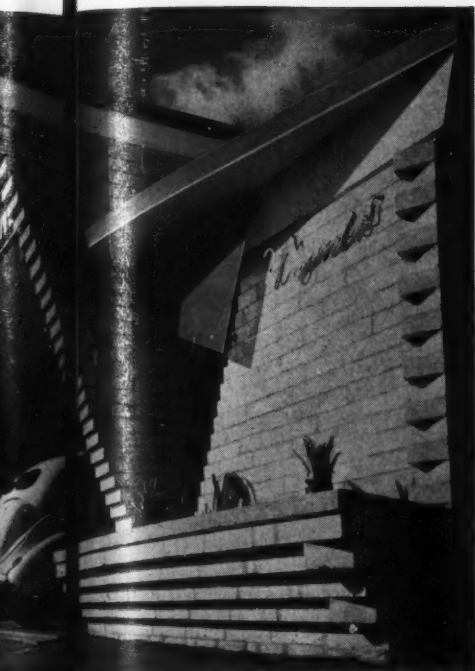
canopy is supported by steel pipe frames; construction is of steel wide-flange roof beams with a 3 by 6 T & G roof deck and a suspended lath and plaster ceiling. On top of it is a specially designed sign panel intended to eliminate the possibility of the unattractive signs so frequently used by service stations. Wash rack and lubrication hoist are housed together in a high-ceilinged unit with adjacent storage and toilet facilities. A small office and parts sales room occupy a connecting low wing.

DESIGNED TO ATTRACT ATTENTION



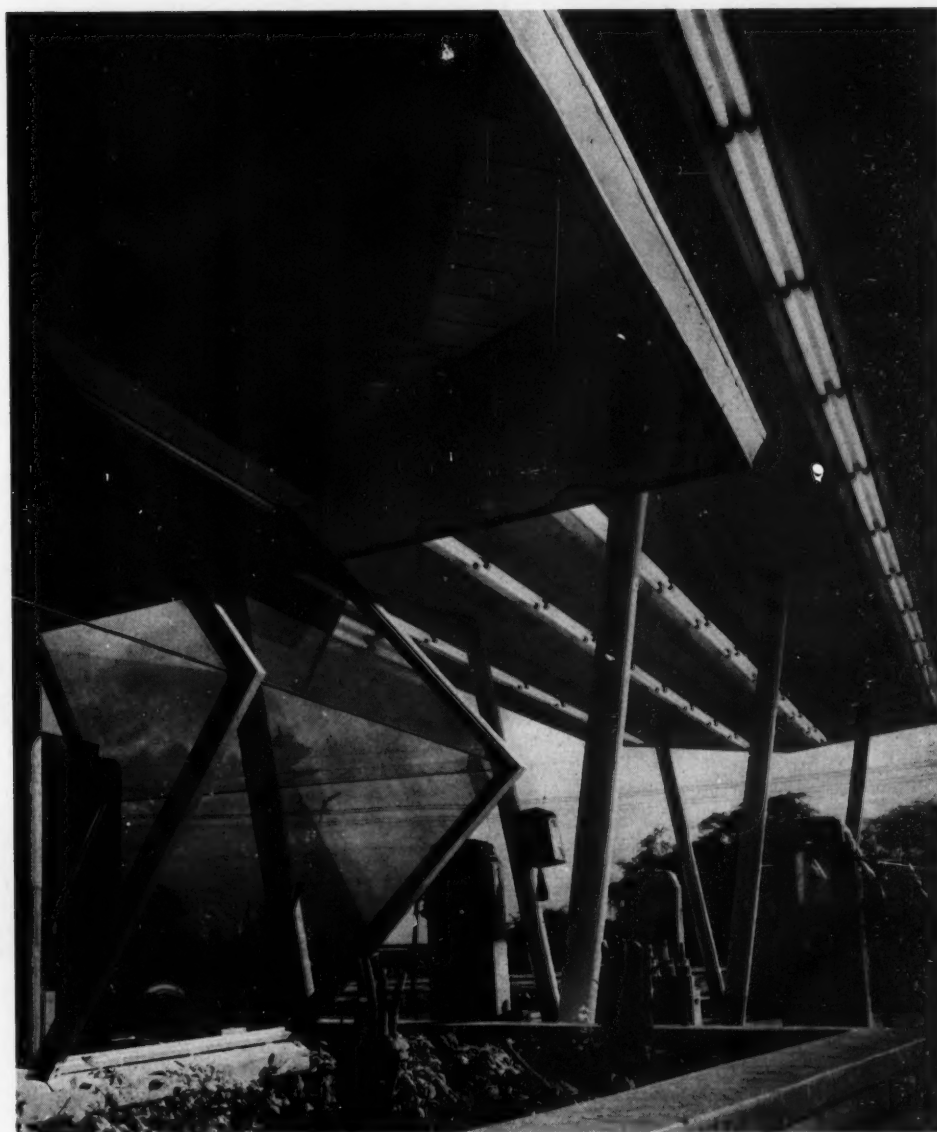
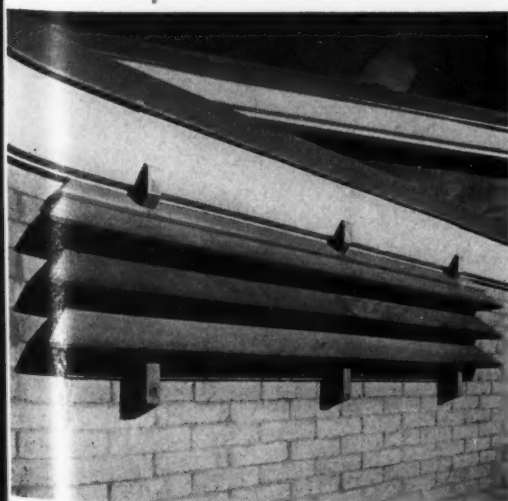
Main structure is of locally made buff-colored concrete block walls with wood roof framing, using steel members for beams in long span. Mild Hawaiian climate eliminated need for doors and heating facilities





R. Wenkam

Show windows in office wing (right) were constructed of an inexpensive line of store front moldings and heat absorbing glass. Design was deliberately unusual, partly for effect and partly as an experiment in solving problem of show window reflections. Louvers (below) screen storage room windows

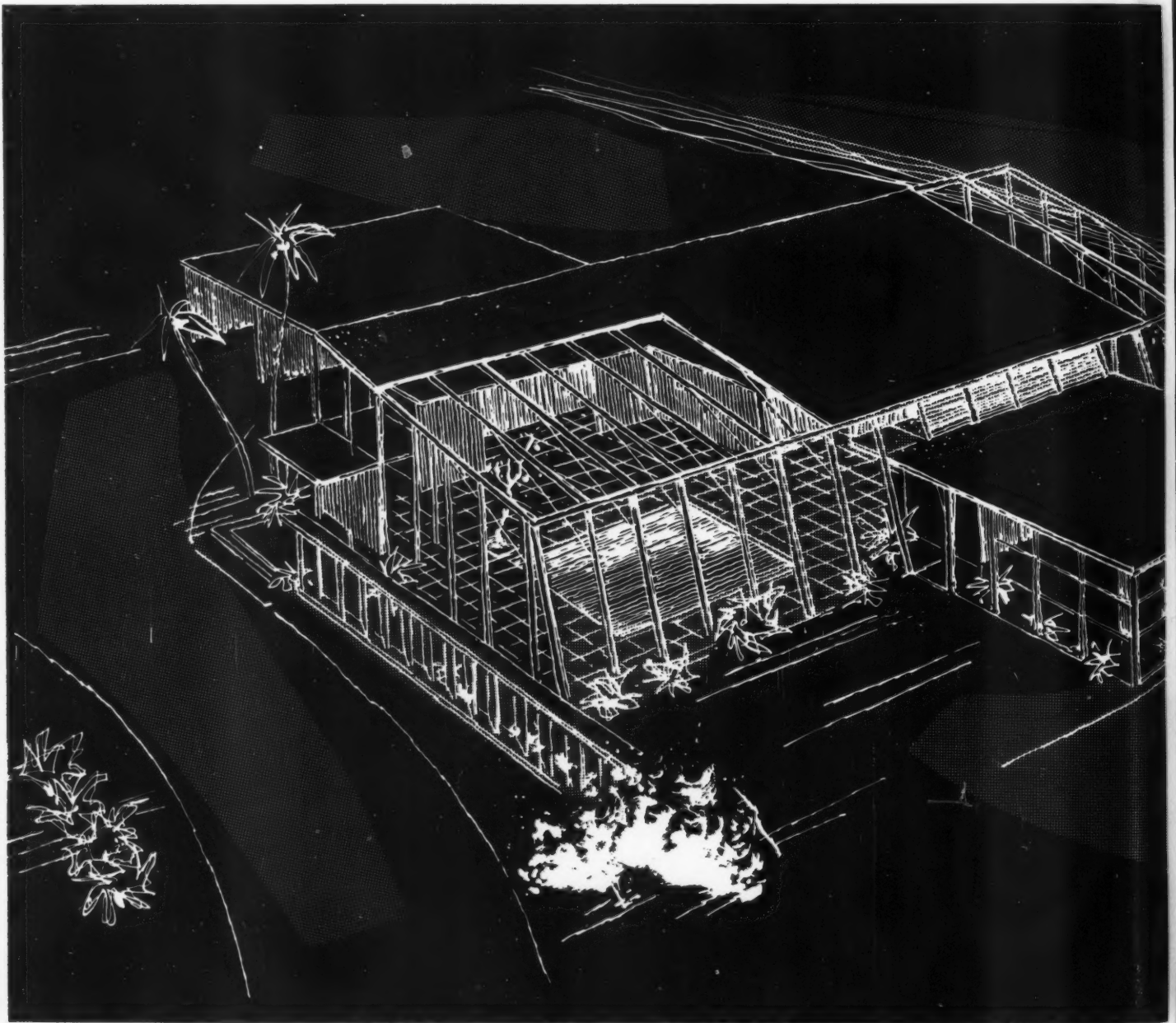


HOUSE DESIGNED FOR

Residence for Mr. and Mrs. Roland Phillips

Miami, Florida

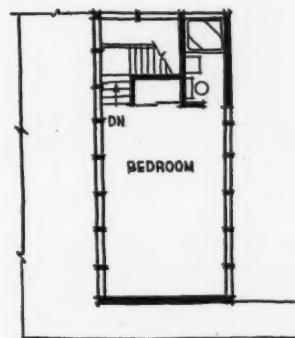
Igor B. Polevitzky, Architect



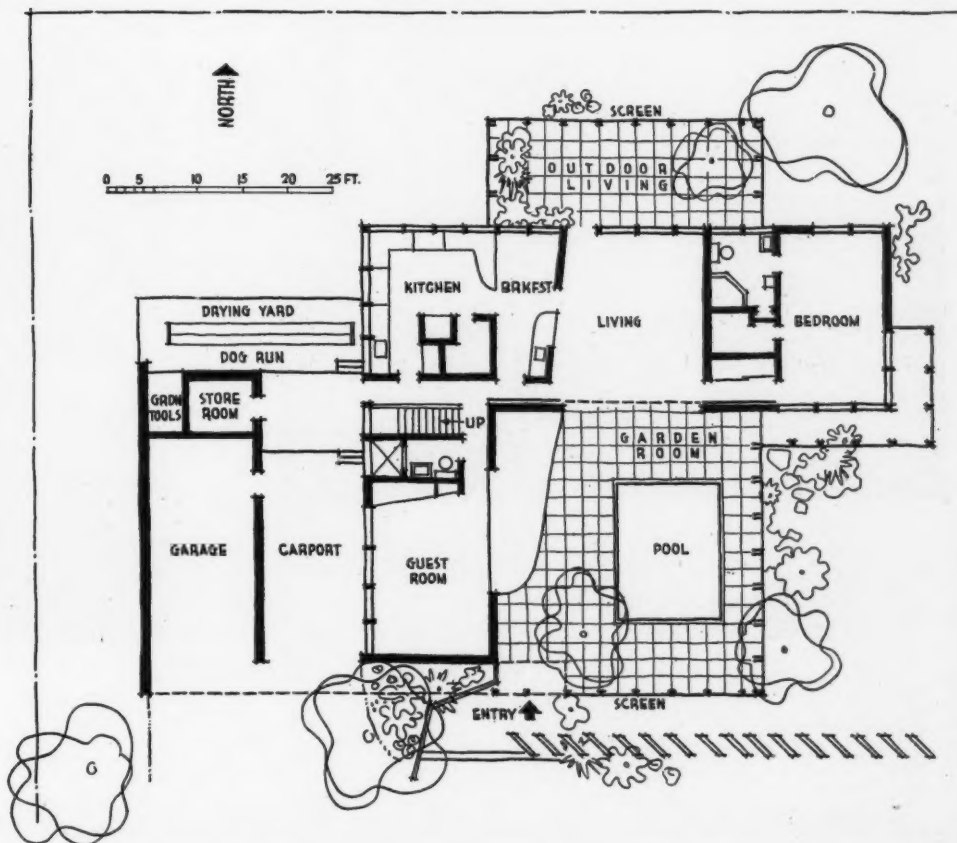
THE SUB-TROPICS

THE unusual character of this Florida house is the result of the architect's great interest in developing large, but inexpensive, semi-protected living areas for houses in sub-tropical climates. In this example, a considerable amount of extra living space is provided by the use of an inexpensive wood frame, partial roofing, and baffle walls for privacy. This screened-in "atmospheric envelope" can reportedly be used for 95 per cent of the weather conditions. A minimum of completely closed-in areas is provided for use during the few really cold days in the area. These rooms are all interconnected, as the occasional cold weather makes it impractical to use only outdoor passageways.

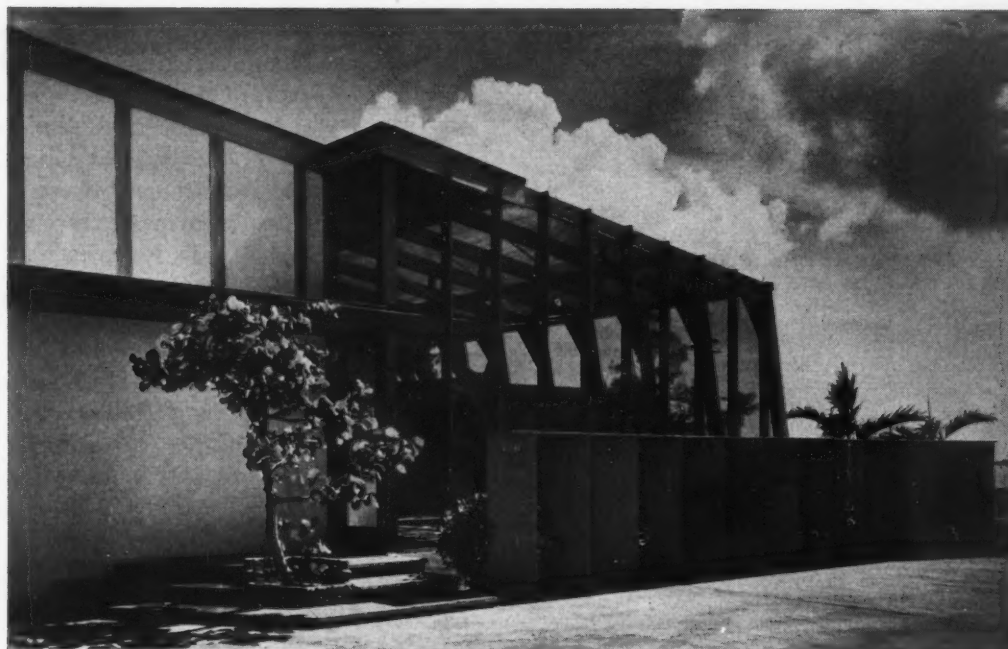
The Douglas Fir frame was designed to withstand hurricane winds of 150 miles per hour, and is anchored in reinforced concrete footings. Exterior walls are concrete block and cement brick; the roof is 2-in. composition board.



SECOND FLOOR



FLORIDA HOUSE



Rudi Rada

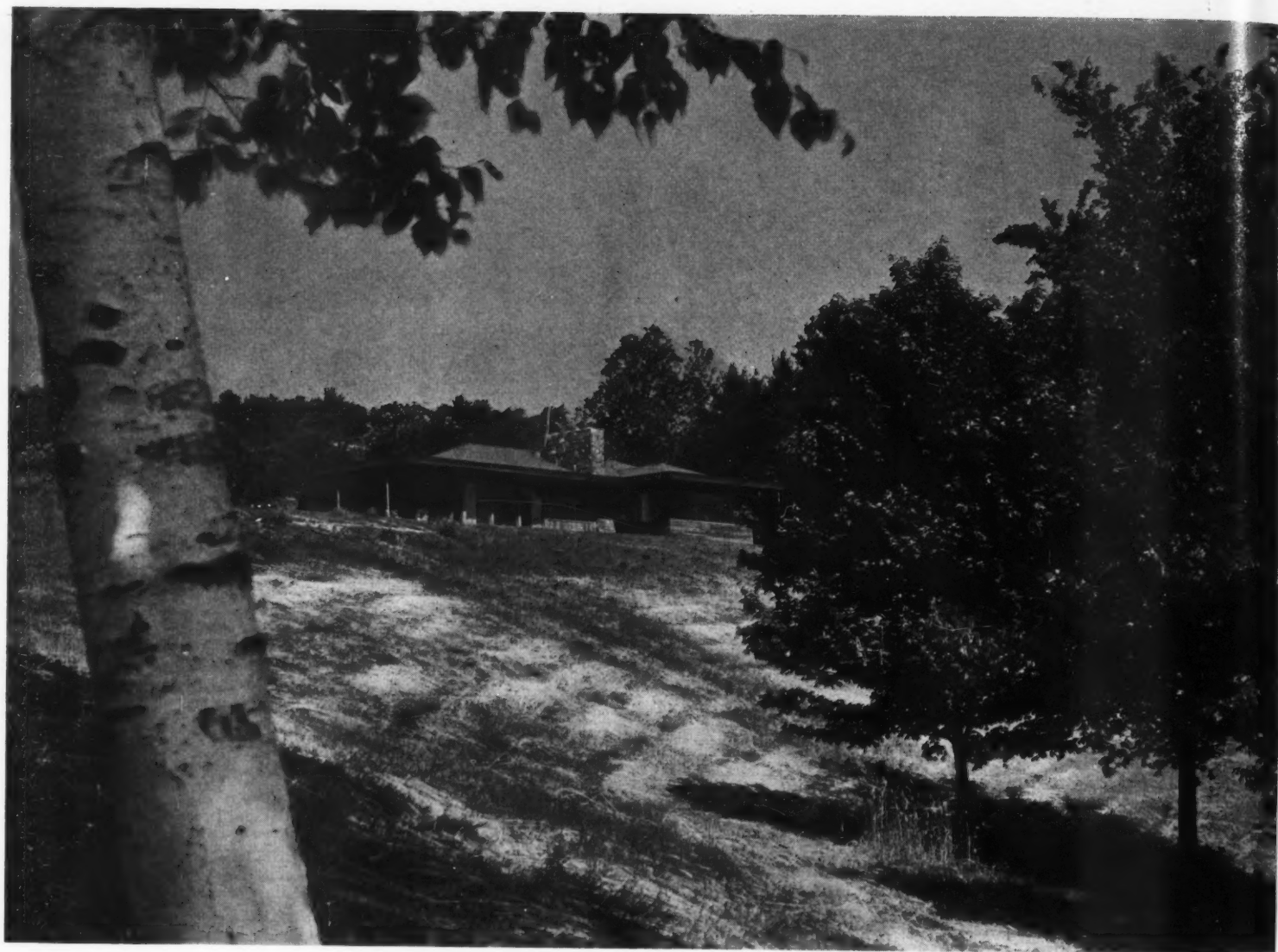
Privacy is gained for screened areas by use of low baffle wall on street side. All windows are fitted with glass or wood jalousies



Floors throughout the house are terrazzo; interior walls are plaster, plywood or cypress. Living room and guest room can be closed off with large sliding doors







HOUSE ON A NEW ENGLAND HILLTOP

Residence for Mr. and Mrs. George W. Wilcox

Greenfield, Massachusetts

James A. Britton, Architect



Joseph W. Molitor

THE COMPACT, SIMPLE DESIGN of this house, with its natural finishes, reflects not only its setting, but also a tempered view towards contemporary design. Such details as shaped cornices and a hipped roof over the main portion of the house considerably soften the external appearance. The east elevation, which overlooks the view, has large windows opening off the major rooms, and a sheltered terrace. The entrance facade, on the other hand, is kept relatively closed and achieves a sense of solidity and privacy.

The house is wood frame, with foundation walls of cinder blocks. Siding is redwood, with a preservative stain finish; the roof is surfaced with asphalt shingles. Interiors are finished with plaster walls, either painted or papered, and oak floors. A full basement is under the main portion of the house, and contains the furnace for the warm air heating system, laundry, and provision for a future recreation room. The basement is lighted by steel areaways with iron grate covers. The large chimney wall is of fieldstone.

A hipped roof, wide overhangs and shaped cornices give a distinctive character to the otherwise simple design of this house. The east front (left) overlooks view; entrance is on west, has good sun protection

NEW ENGLAND HOUSE



Joseph W. Molitor

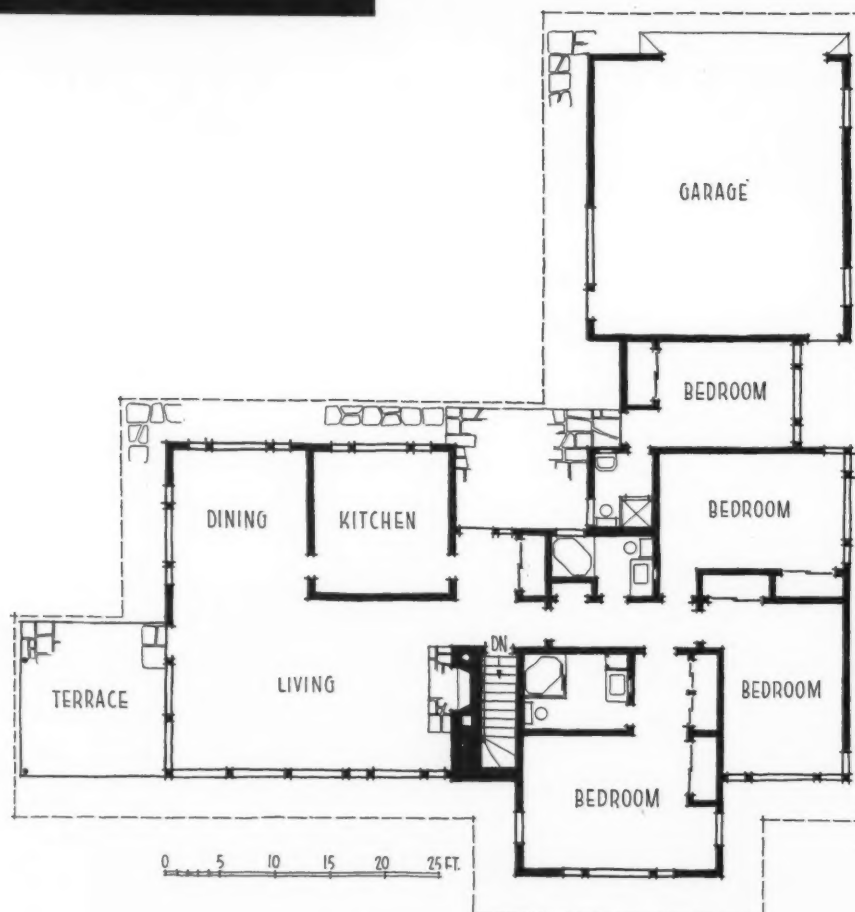


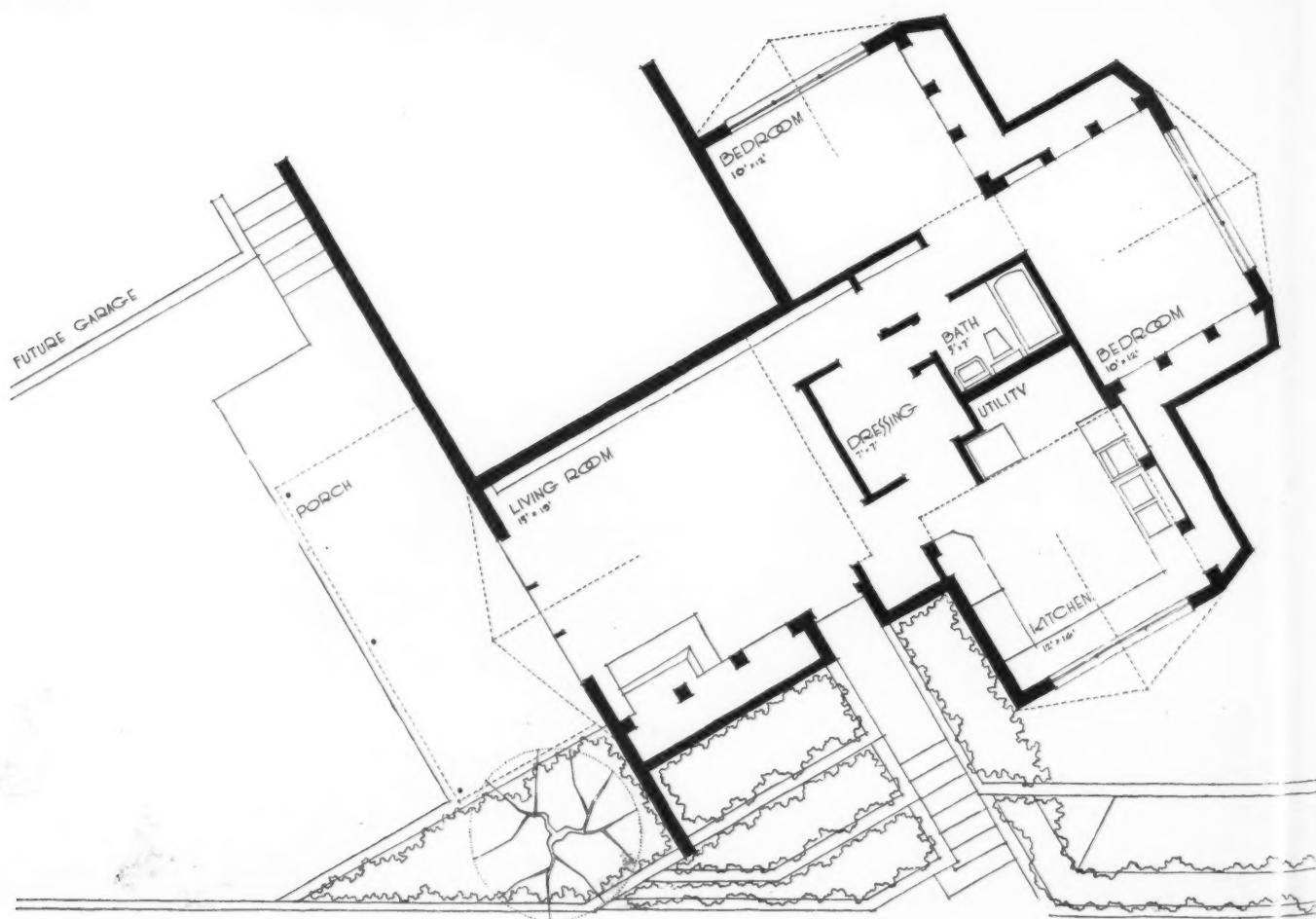


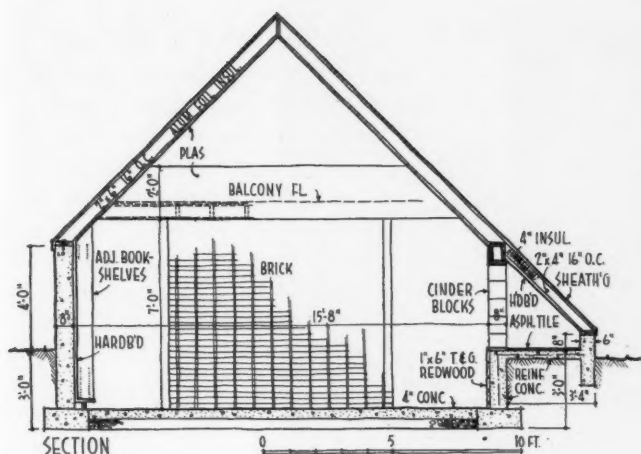
Photo at far left shows garage wing from entrance porch. A 4-ft overhang shelters walk, continues around south and east sides of house for sun protection (smaller photo, left). Two views of living room are shown directly above. Kitchen (right) has all-electric equipment. Below: north elevation





Hedrich-Blessing





UNIQUE CONCEPT PROVIDES LOW COST HOUSE

Residence of Henry C. Toll, Architect

Denver, Colorado

A minimum of walls—in the usual sense—characterizes this house both inside and out; less expensive roofing surfaces most of exterior, central utility core separates interior rooms. Floor slab rests on footing base 2 ft 4 in. below grade (see section above). Terraces are faced with brick and concrete because of water shortage, lack of grass

A NEW APPROACH to the problem of meeting Building Code requirements with low cost construction has been made by Architect Henry Toll in the design of his own house. Two major requirements of the Denver Code are masonry construction, and a footing depth of at least 3 ft below grade. Local investigation, however, proved that roofing was the cheapest exterior finish in that vicinity. These three items were combined to form an extremely interesting structural system for the house. Floor slabs were poured 2 ft 4 in. below grade, level with the top of minimum depth footings. To classify the house as masonry construction, 8 by 8 in. cinder block columns approximately 3 ft high are placed on top of the foundation, and carry a box girder on which the roof joists rest. A slab was poured on grade outside the wall line, and the edge of the slab tied to the back of the box girder. Thus masonry is reduced to about 1/10 of the usual amount, and the exterior is almost entirely roofing. No ceiling is required for a tension member, as the roof thrust goes directly to grade, so a saving was also made on lumber. Rooms are about 6 ft 3 in. high at plate line, 15 ft at center. Orientation and overhangs were carefully studied to reduce sun's heat and glare — a problem even in winter in the Denver area.

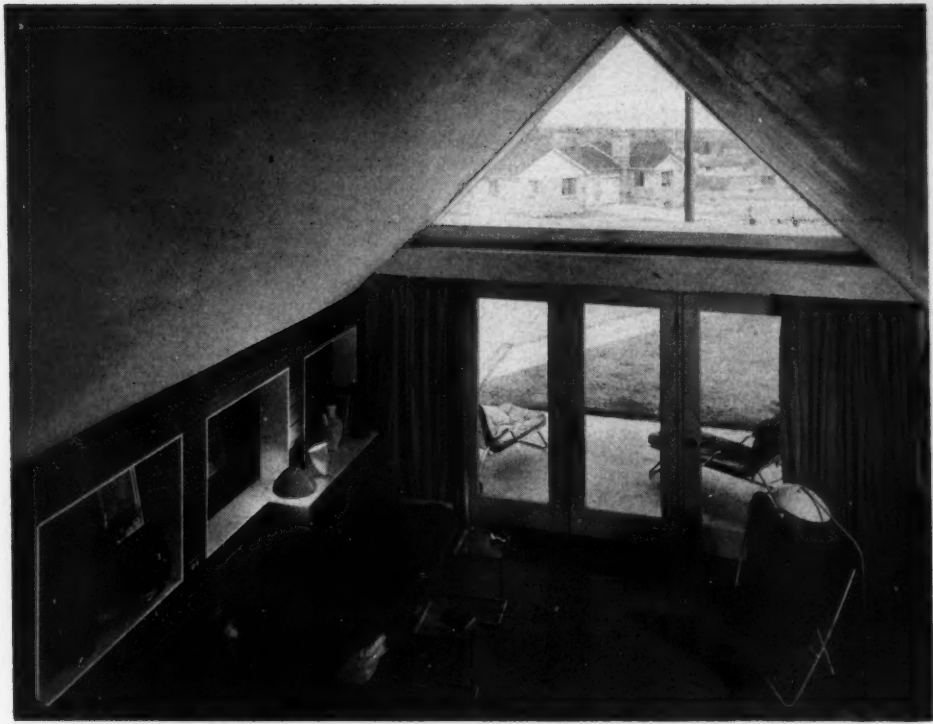


TOLL HOUSE

The four gable ends of the house are virtually all glass with ample overhangs for sun control, good provision for cross ventilation. The unique structural system provides much extra storage space at counter height without sacrificing floor space. Ceilings serve as radiant heat panels, have 1/4-in. copper pipe embedded in plaster

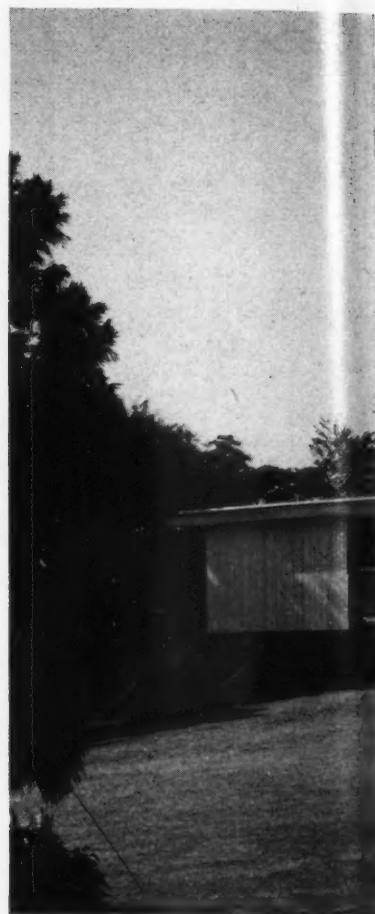
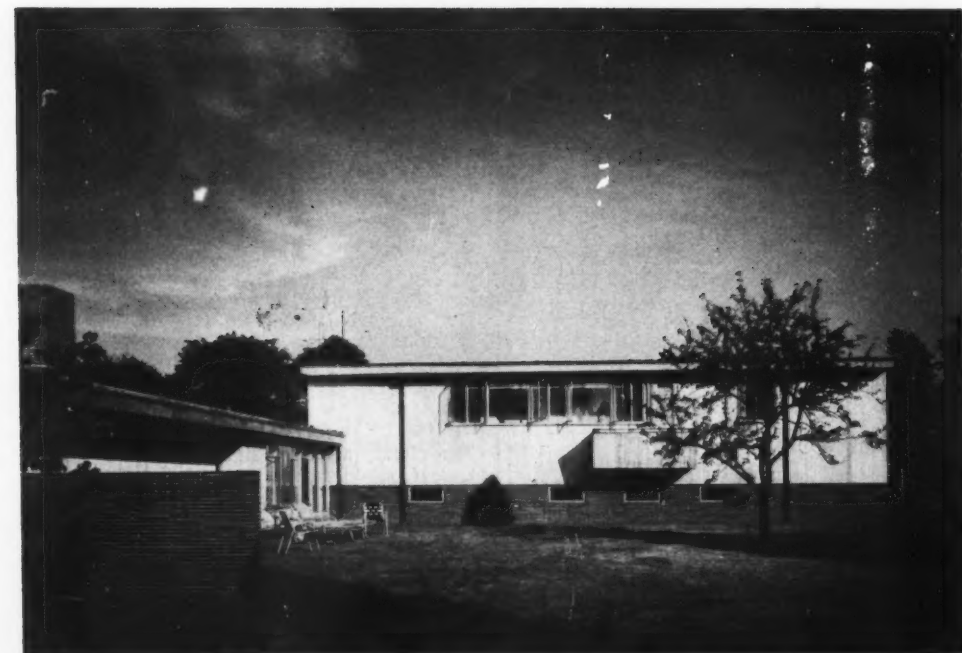
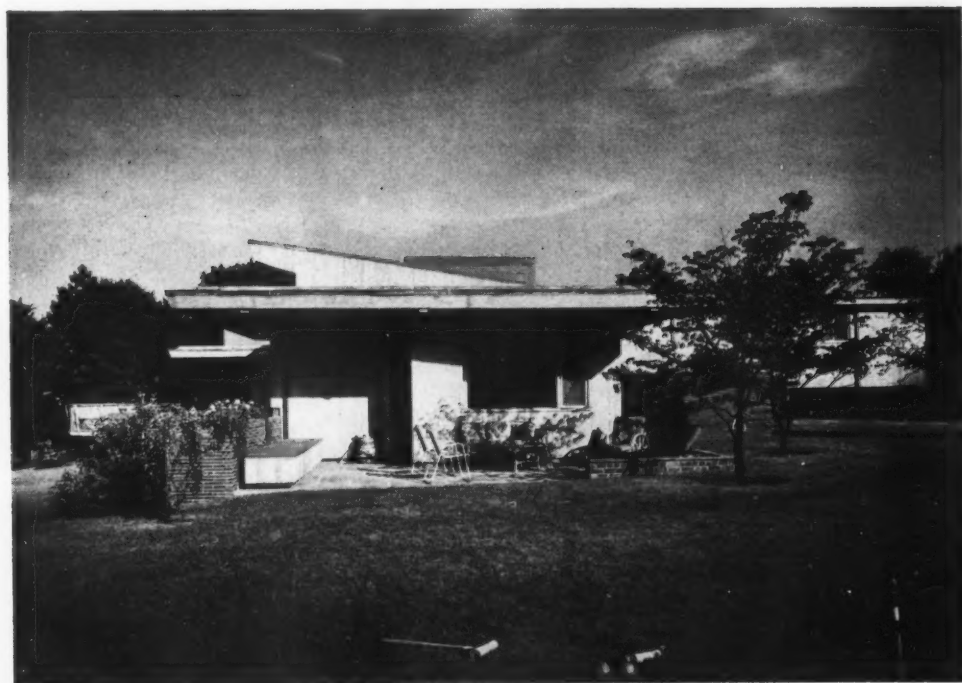


Master bedroom on balcony, visible in photo above, is at roof intersection, overlooks all rooms of house. Walls are redwood, floors asphalt—or green ceramic—tile



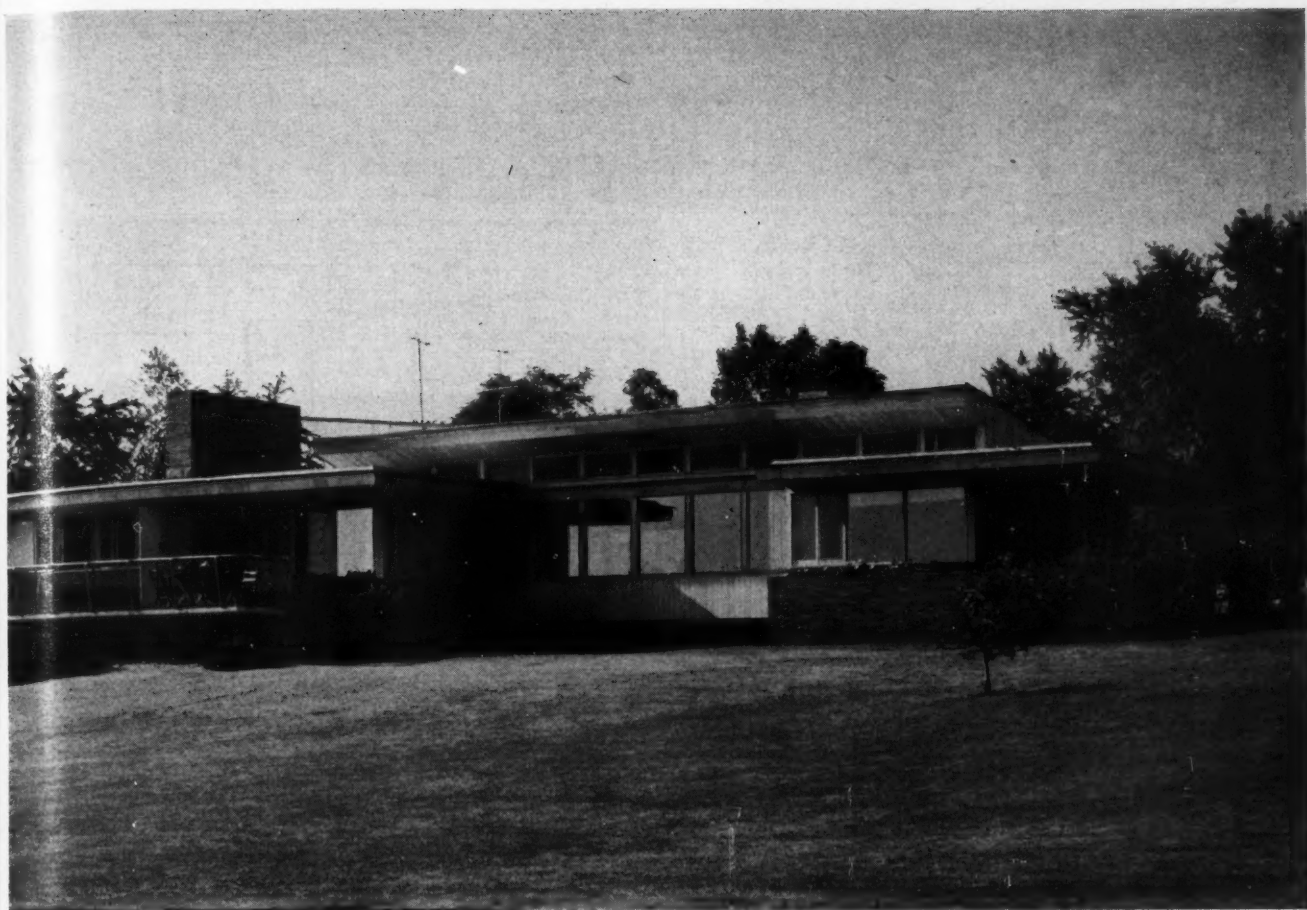
Hedrich-Blessing





Ezra Stoller

The exterior of the house combines vertical red cypress siding and roman brick. Above: side façade and dining terrace overlook garden and view. Top left: entrance drive at front. The two remaining photos show closeups of the studio and the rear façade



HOUSE FOR AN ACTIVE FAMILY

Sands Point, Long Island, New York

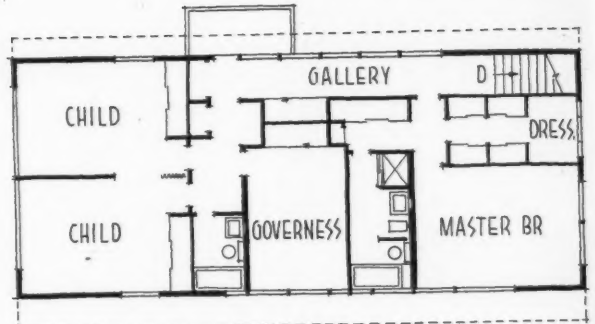
Albert Kennerly, Architect

THIS EXPANSIVE HOUSE was designed to provide for the somewhat formal way of life of a family with an amazing number of interests and activities. The architect was asked to include facilities for painting, sculpture, pottery work, piano playing, ballet practice, ping pong, photography, accommodations for extra guests, a wine and rare foods room, a dog room opening onto two dog runs, parking space for about 20 cars — plus the usual quarters for a family of four and a staff of servants. It was further specified that no family bedroom be on the ground floor level, yet a full stair was not acceptable.

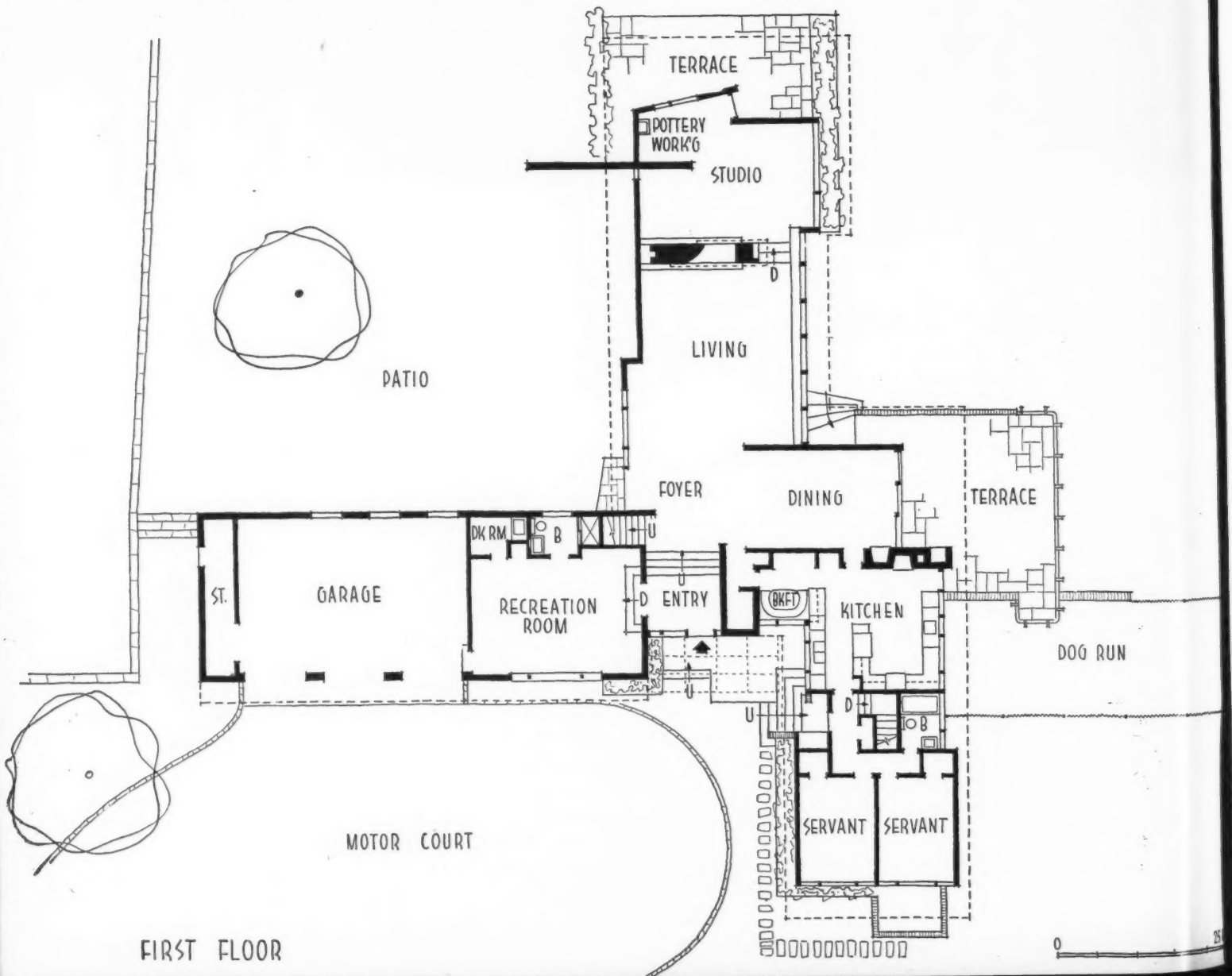
These requirements have been skillfully worked into

a very coherent, open plan which also provides a good degree of privacy and segregation for the various activities. The structural frame of the house is of Douglas Fir, with exterior walls of red cypress in a natural, lime-rubbed finish, and red roman brick. Roofing is built-up tar and gravel or white tile. Interior walls are finished in sand float plaster, oak paneling or figured gum. Floors in the main living areas are random-width teak doweled to the sub-floor; others are waxed common brick or asphalt tile. The clients worked very closely with the architect, especially in the design of the interiors and selection of furnishings, textures and colors.

LONG ISLAND HOUSE



SECOND FLOOR

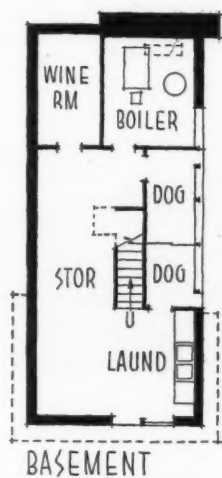


FIRST FLOOR



Ezra Stoller

Front entrance (photo far left) is sheltered by trellis; bay directly over door is glazed. Living room (above and right) has textured, warm colored finishes



LONG ISLAND HOUSE

Second floor bedrooms are only a half flight of stairs above living rooms, due to use of a small entry stair. The two children's rooms (right) are identical, separated by folding door. A governess' room is adjoining. Master bedroom suite is on same level



Ezra Stoller



Kitchen (above) is efficiently planned, has dining nook for 5

BUILDING THE ONE-STORY HOSPITAL

An outline of techniques and materials to encourage sound, economical construction, prepared by an expert on these matters from the Division of Hospital Facilities

by Julian Smariga *

IDEALLY, all the building materials for any hospital should be durable, easily maintained and non-combustible. These are on the market, but, in addition to these desirable functional qualities, the selection of materials is influenced by the question of economy, especially in smaller hospitals. This article presents a number of basic ideas to assist in the selection of materials and construction techniques for the one story hospital from 25 to 100 beds.

1. FOUNDATIONS

Spread footings of concrete will gen-

erally be satisfactory for most locations. If the soil conditions of a particular site require a more expensive type of foundation, it may be desirable to consider relocating the building, or even selecting a new site.

2. BASEMENT

A partial basement provides space for a boiler room, but with favorable site conditions, it may be feasible and desirable to provide a more extensive basement area for additional services. Increased laundry facilities, inactive records storage, central linen supply,

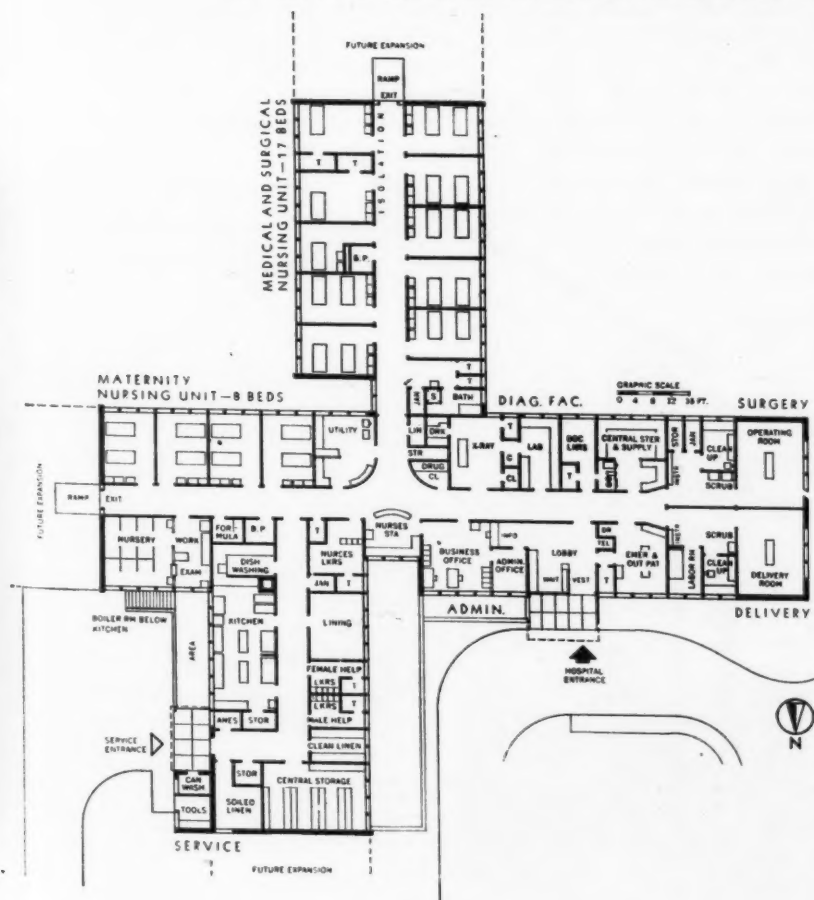
general storage, mechanical equipment as well as the boiler room may be placed on the lower level. An elevator will probably be required when so many services are located in the basement. (A hydraulic type is very satisfactory.)

Watertight construction is mandatory for all basement walls.¹ If the basement floor level extends below the ground water line, positive and complete protection from the exterior water must be

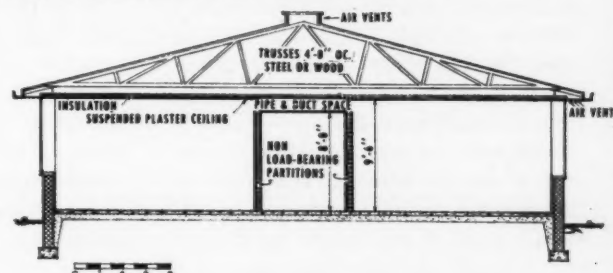
* Structural Engineer, Division of Hospital Facilities, U. S. Public Health Service, Federal Security Agency.

¹ Prevention of Dampness in Basements, Cyrus C. Fishburn, Journal of the American Concrete Institute, Feb. 1948.

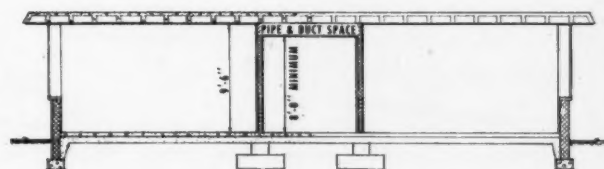
1. Plan for a typical 25-bed, one-story hospital and three possible types of roof construction



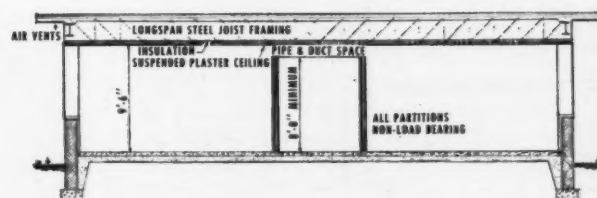
The plan shows elements and arrangements typical of one-story hospitals, but 25 beds is not the limit because 100-bed units can be planned and built to work efficiently on one floor



Wood or steel trusses



Concrete girders and beams



Long-span steel joists

When the roof structure spans between exterior walls, interior partitions can be non-load bearing and construction can be speeded. Only the concrete roof requires interior columns

provided. Fig. 2A shows the use of a membrane type waterproofing for this condition. It is important that all walls be structurally designed to withstand the pressure of the saturated soil and the floor should be able to resist the hydraulic uplift.

If the basement area is extensive and the water level lies appreciably above the basement floor, the cost of positive waterproofing measures (both structural and hydraulic) would probably be excessive.

Figure 2B shows an effective type of construction when the basement floor lies above the ground water level and may be subject only to limited periods of dampness from soaking rains or an occasional rise in the water table.

Alternative protective coatings may consist of three brush coats of grout (cement and fine sand mixture), prepared waterproofing mixtures, or bituminous coatings.

The surface of the ground adjacent to the building should be graded to divert all surface water away from the building. A minimum slope of $\frac{1}{4}$ in. per ft for a distance of 10 ft from the walls is generally satisfactory. Sodding or paving these sloping areas will help to reduce excessive absorption of surface water. Also, the discharge from roof downspouts should be safely conducted away from the building walls.

Sufficient clearance should be allowed around and also above all equipment in the boiler room for the installation and maintenance of the connecting fittings and controls. A large opening in the

exterior wall should be conveniently available for the installation and possible future removal of large sections of mechanical equipment.

Boiler room construction must be fire-resistive. This room should be separated from other hospital sections by suitable masonry walls and any opening in such walls must be protected by a fire door. It is highly desirable to insulate the ceiling to maintain as cool a floor as possible in the rooms directly overhead, especially for kitchen, laundry, other service rooms, or for an air conditioned space such as an operating suite.

An alternate arrangement which may be more desirable in some locations would place the boiler room at grade level adjacent to the service entrance. Better light, ventilation, accessibility and utility could be assured with little or no increase in cost.

3. FLOOR CONSTRUCTION

The floor construction of smaller hospitals may be of two types — (1) suspended or raised type in which the floor is supported by bearing walls or girders, or (2) concrete slab directly on the ground.

With the suspended floor system, the floor construction is elevated to provide a crawl space. Many times it is too small. The crawl space should be large enough to provide access and working space to facilitate the installation and maintenance of conduits, piping and ducts. Good ventilation of the crawl space using well screened openings and proper soil treatment is necessary to

prevent dampness and other unsanitary conditions.² Floor insulation will generally be required to assure comfortable conditions in cold weather, and such insulation should have a vapor barrier on the warm side of the insulation.

The popular concrete slab on grade can be readily adapted to hospital structures. If the site is fairly level, site preparation can be kept to a minimum. A uniformly compacted subgrade is required to minimize the possibility of settlement cracks in the floor. By utilizing an overhead distribution system for the supply service lines within the building, it is possible to keep all piping except the drainage system from being concealed in the floor. Since the drainage system is made of cast iron or other durable material, the hazard of repair and replacement is minimized. However, an adequate number of cleanouts should be installed in the drainage system to facilitate proper maintenance.

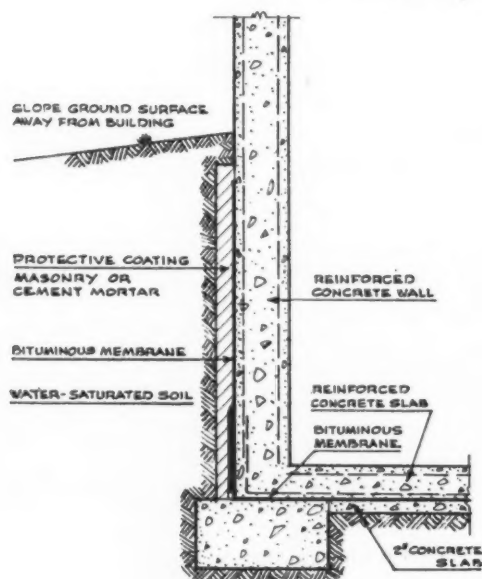
Moisture absorption and condensation on the slab can be avoided by the use of an insulating layer of tile or gravel between the concrete slab and soil.³

With a concrete floor slab on grade, the nature of the soil which will underlie the slab should be carefully observed. In some geographical areas, unstable soil formations such as peat pockets, may present difficulties with a floor laid on the ground.

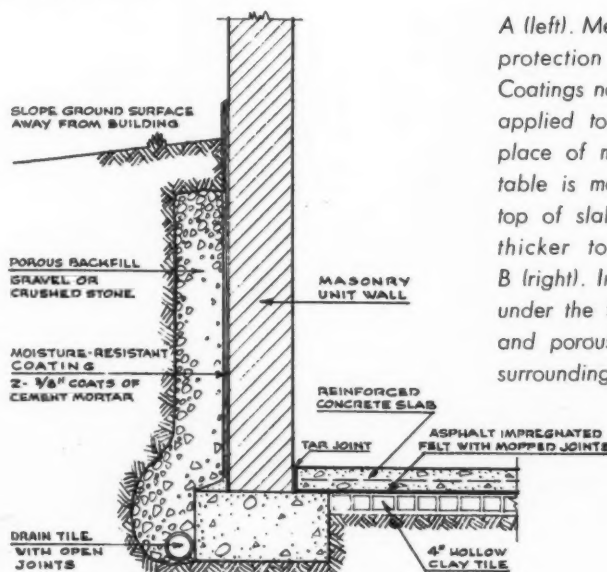
(Continued on page 230)

² Controlling Moisture in Buildings, ARCHITECTURAL RECORD, August 1948.
³ Insulation of Concrete Floors in Dwellings, ARCHITECTURAL RECORD, Jan. 1949.

2. Waterproofing basement walls



GROUND WATER LEVEL IS ABOVE BASEMENT FLOOR

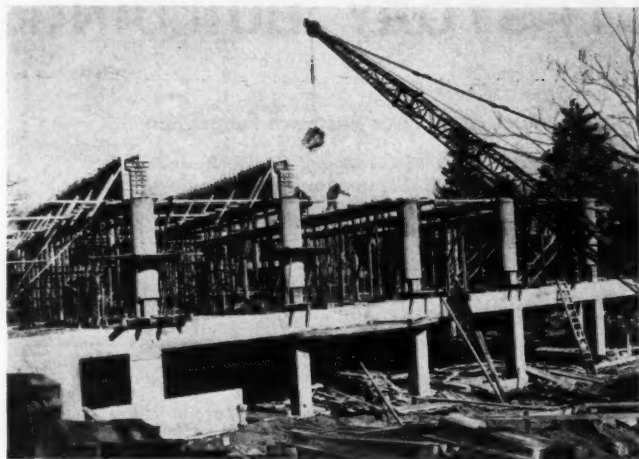


GROUND WATER LEVEL IS BELOW BASEMENT FLOOR

A (left). Membrane gives added protection against seepage. Coatings now available can be applied to the inside wall in place of membrane. If water-table is more than 1 ft above top of slab, it must be made thicker to prevent floating. B (right). In sandy soils, the tile under the floor can be omitted and porous backfill used only surrounding the drain tile



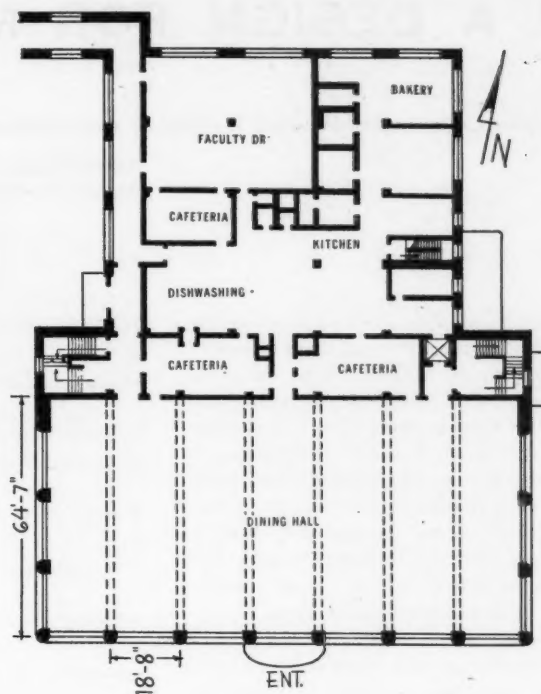
COLLEGE BUILDING MAKES A SWITCH TO PRESTRESSED CONCRETE



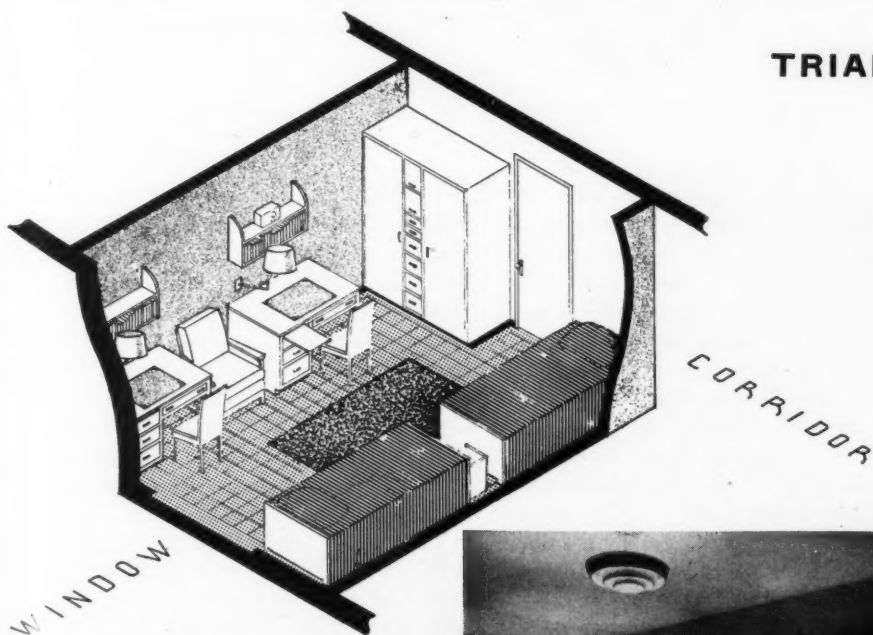
THE application of prestressed concrete girders and beams in this country had just gotten started when the shortage of steel came along. Then architects and engineers had to think about materials other than structural steel — wood, reinforced concrete, or perhaps prestressed concrete — for buildings on which construction was imminent.

Ordinary reinforced concrete worked in some cases, but not all, and one of

(Continued on page 238)



At Manhattanville College, the six girders over the dining hall which support the floor of the assembly room were originally planned in steel, but when the shortage came, the architects decided to use prestressed concrete to meet the time limit rather than redesign the building for reinforced concrete



Mock-up room at Case Institute of Technology produced cost-saving ideas from the students. Actual room is shown at right. Lighting is inexpensive, neat, and easy on the eyes. Desk lamps were designed specially for adjustability and comfort



TRIAL-TESTED COLLEGE DORM

CASE Institute of Technology in Cleveland was able to build and furnish a dormitory at the commendable low cost of less than \$2000 per student housed, according to a report to **ARCHITECTURAL RECORD** by J. Trevor Guy, A.I.A., of Case. School officials give the main credit to a three-part study:

1. A survey to determine the students' needs, size of building required and expected return from rentals.

2. A study made of new dormitories at other schools.

3. Testing of a flexible mock-up room to determine the size and interior furnishings of the 154 sleeping-study rooms. After thorough inspection by the student body, two students lived in the room for several weeks.

Results of the research were turned over to the architects, Small, Smith and Reeb for use in planning the dormitory building which was completed in March 1951 at a cost of about \$500,000 or \$1645 per student housed. Furniture cost was \$300,000 or \$330 per student

(Continued on page 242)

THIN BRICK WALLS ARE THE ONLY SUPPORT IN A DESIGN FOR MULTI-STORY BUILDINGS

By Robert L. Davison of Howard T. Fisher & Associates and Clarence B. Monk of Armour Research Foundation

ARCHITECTURAL RECORD REPORT No. 3, on Housing and Home Finance Agency Research Project No. 1-T-99 with Illinois Institute of Technology (see p. 216)

Editors Note: The idea of 6-in. brick walls holding up the concrete floors of a building 10 stories high, or even higher, rather staggers the imagination, but that is the gist of the design presented here. It's not just supposition because as much study has been devoted to the principles involved. The ways in which the authors feel such a daring structure will behave under the effects of wind, gravity and earthquake forces are outlined here.

It is beyond the scope of this article to substantiate every premise with a host of formulas and data as would be required for presentation in a technical paper. This is contemplated for the future. Its purpose is to get the core of an idea before you so that the researchers may have the benefit of your thinking.

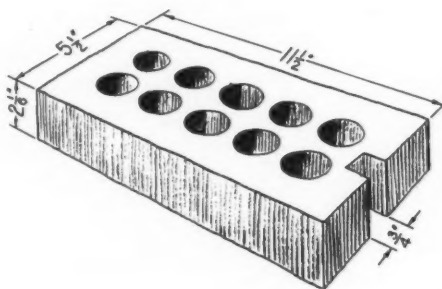
It is too early to guess just how far reaching this scheme could be. It is not impossible that it might rival the development of the steel skeleton frame. The system is efficient in the use of materials — the walls are used structurally as well as for space separation and sound isolation; but they are, of course, fixed once and for all, and they should be directly in line, one over the other.

In an engineering sense, the system is a reversal in the trend toward more complicated structural systems and methods of analysis. It takes the old fashioned bearing wall and puts it within the structure in such a way that it need not get increasingly thicker the closer it is to the foundation, but remains 6 in. thick for the whole height of the building. Actually the engineering problems of a 10-story building are reduced to those posed by a stack of ten one-story buildings.

"SCR Multi-Story Construction," developed by Structural Clay Products Research Foundation, is based upon the use of the new SCR brick, a modular clay unit with nominal dimensions 6 by 12 in. and three courses to 8 in. (see sketch this page; also see ARCHITECTURAL RECORD, May 1952, p. 214). However, the engineering principles could be applied also to buildings using other types of masonry materials.

FEATURES OF THIS NEW STRUCTURAL SYSTEM:

- Dispenses with the conventional skeleton frame of steel or reinforced concrete
- Employs thin partition walls as the sole vertical structural elements, wholly without the use of steel or other reinforcement
- Takes advantage of the inherent prestressing provided by gravity
- Improves sound isolation within the building
- Permits use of inexpensive spread foundations
- Simplifies construction and eliminates costly engineering and detailing



Supporting walls are composed of this new SCR brick having a nominal depth of 6 in.

SIX-INCH THICK partition walls of brick, without any added columns, girders, or reinforcing, can theoretically hold up the floors of an apartment building 10 or more stories high. This is accomplished by setting brick walls between rigid, continuous floor slabs to form a discontinuous stack of stories which are held together by the downward pull of gravity. Wind loads are transmitted from exterior walls to the floor slabs, which in turn transfer them by friction to the bearing partition walls.

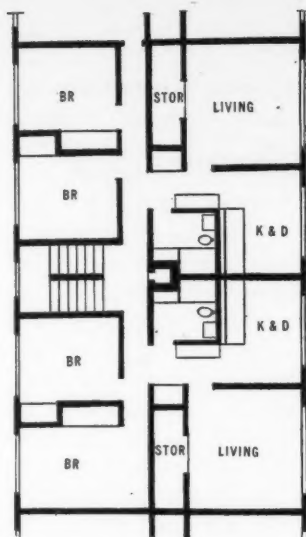
Thus, "SCR Multi-Story Construction" will be limited in its use to those types of buildings where repetitive bearing walls occur: apartment buildings, for example, and offices, hospitals and hotels. Plan requirements in buildings such as these can allow the weight of the structure to be sustained on the wall lines, instead of on columns, as in skeleton framing.

This structural system is one of a number being analyzed on a compara-

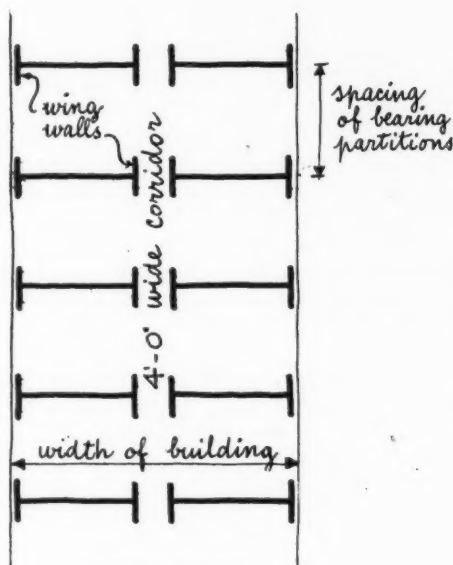
tive basis by Illinois Institute of Technology under the Housing and Home Finance Agency contract in an effort to improve residential design and construction in multi-story dwellings.

For demonstration purposes we have taken a typical apartment house floor plan (actually the "basic" plan used in the HHFA Research Project described in ARCHITECTURAL RECORD, December, 1951). This plan might be anywhere from 25 to 55 ft wide overall.

To simplify mathematical calculations, the partition walls in the plan have been reduced to a series of transverse bearing partitions (the space between them could range from 9 to 27 ft) buttressed by wing walls which represent corridor, closet and other longitudinal partitions. Although a simple rectangular structure has been assumed, the construction system is not limited to rectangular buildings, and buildings without continuous corridors would prove much stronger.



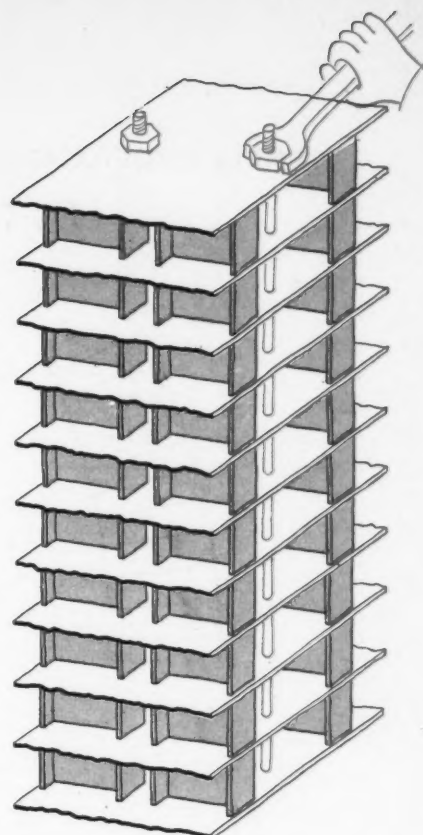
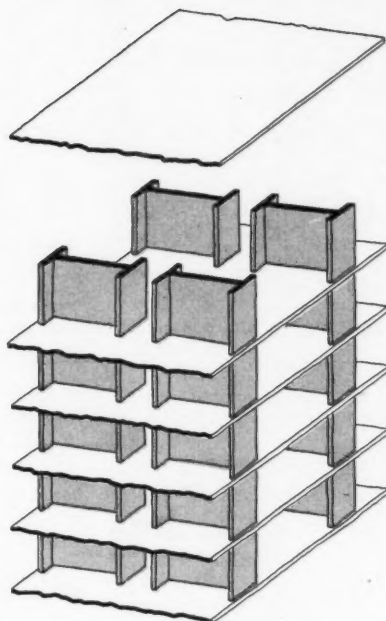
"BASIC" PLAN



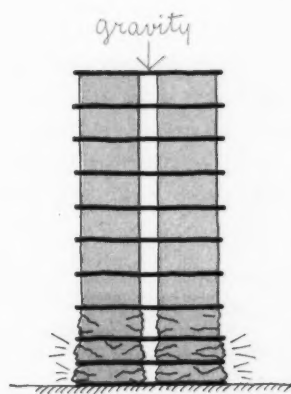
SIMPLIFIED VERSION

Investigating the building design becomes analogous to investigating a prestressed cantilever beam made up of blocks, gravity being the prestressing force in this case, and wind the load on the beam. It will be necessary to guard against (1) excessive compression within, and bearing between, the walls and floors; (2) opening of the joints between walls and floors; (3) sliding of walls and floors relative to one another; (4) excessive diagonal tension or shearing stress within the walls and floors.

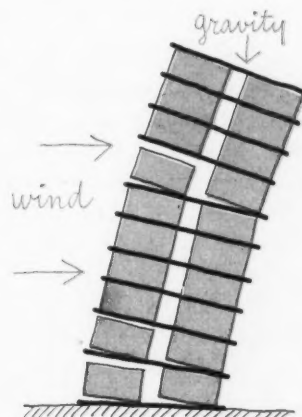
Since the vertically discontinuous brick wall has little strength in tension, it cannot be designed to resist bending forces, but it must resist overturning through dead weight. The deflection in a multi-story building of this type would be due largely to racking (or shear) and would tend to produce a deflection curve the reverse of that normal in skeleton framing (see sketches p. 210). The relative horizontal displacement of one story with respect to another is prevented in a



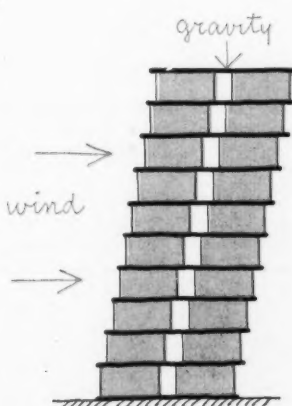
To simplify understanding and analysis of this brick construction system, the "basic" apartment plan used in this research (top left) is idealized into the repetitive series of bearing partitions and wind walls shown at left. In a multi-story building these masonry bearing partitions are interlayered with rigid floor slabs of reinforced concrete (above). Gravity pulls together this stack of floors and bearing walls, so that when subjected to horizontal wind pressure, this structure is analogous to a cantilevered beam prestressed by a long bolt. Below are four types of possible failure investigated



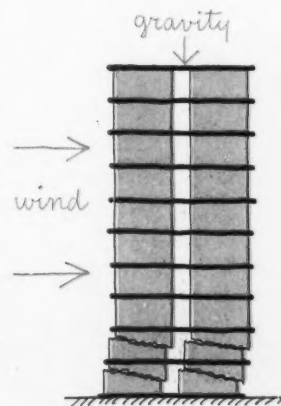
1. excessive compression or bearing



2. opening between walls and floors

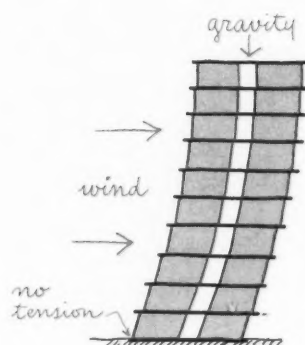
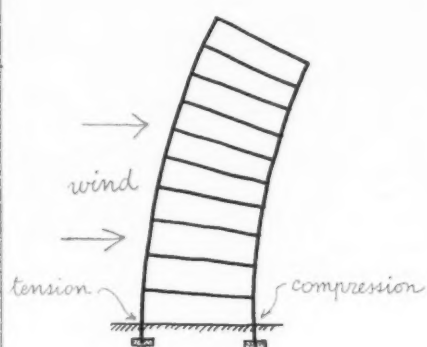


3. sliding of walls and floors

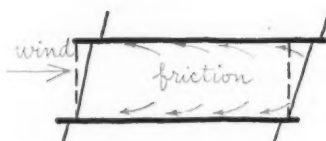
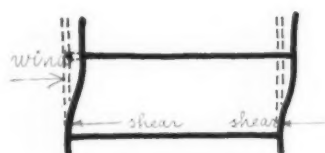


4. excessive diagonal tension

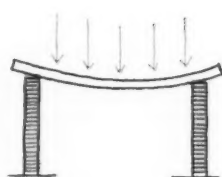
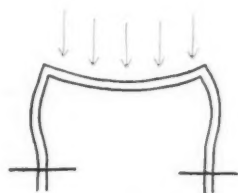
SKELETON FRAME AND BRICK MULTI-STORY CONSTRUCTION: A COMPARISON



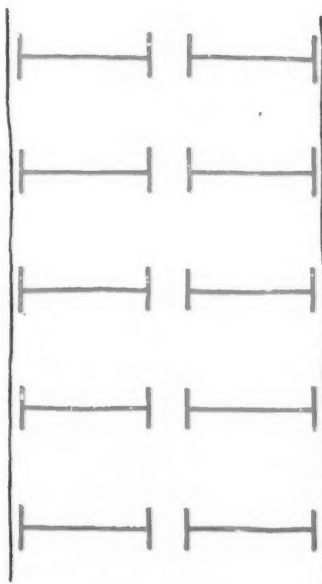
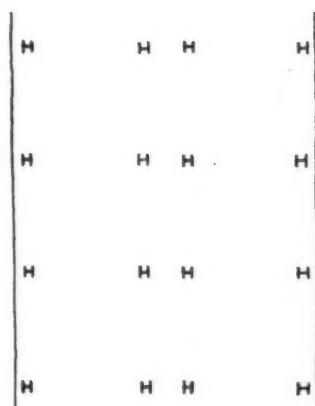
Deflection in the brick multi-story building will be in racking (or shear), and will tend to produce a deflection curve the reverse of that normal in skeleton frame construction



The horizontal displacement of one story relative to the next is prevented in skeleton frame construction by shear across the columns. In the brick wall multi-story construction it is prevented by sliding friction between wall and floors, and by the capacity of the wall itself to resist racking



In skeleton frame construction, because of the continuity of horizontal and vertical elements, the columns must participate in bending. In the brick construction, the floors rest on the brick walls but are not tied into them. So the brick walls do not then have to resist bending



Instead of the point loading typical of skeleton frame construction, the brick walls with their line loading already have their reactions semi-distributed to the soil. In poor soil conditions it would be economical and advisable to use a continuous mat foundation

skeleton frame by shear across the columns; in the brick construction it is prevented by sliding friction between wall and floor, and by the racking capacity of the wall within itself.

Since the resistance of unreinforced masonry walls to bending is limited, it is wise to have the floor system rest on the walls but not tied into them, so that deflections in the floor will not cause the walls to participate in flexure. Theoretically, floors not continuous with the vertical building elements should be thicker than those that are. But because of code requirements or constructional limitations, floors generally are approximately 4 in. thick, in spite of thinner theoretical requirements. In practice, then, the advantages of continuity between horizontal and vertical elements may not be realized.

How far the ponderous weight of the superstructure will clamp the ends of the floor slab to the walls in the lower stories, remains to be investigated. It is important that parts bearing on the walls should not introduce bending into them.

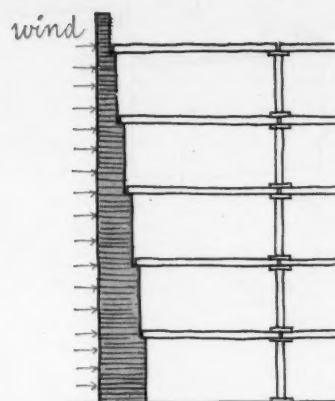
Strength properties and analysis of SCR brick walls

Development of the construction system described in this article has been founded on the strength characteristics of SCR brick walls for home construction. Initially, predictions of wall strength were based on tests of 8 in. solid masonry walls performed at the National Bureau of Standards and reported in *Building Materials and Structures, Report No. 109*. Recommended allowable loads on such walls are summarized in the table at right.

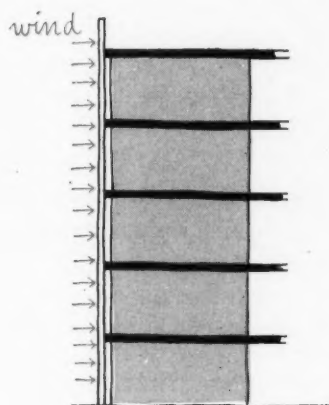
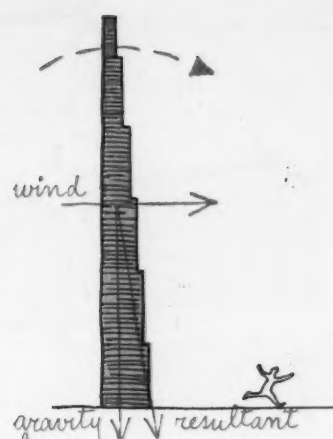
At present, static tests as prescribed by ASTM are being conducted at the Armour Research Foundation to determine experimentally the strength of SCR brick walls for home construction. Indications to date are that the results agree favorably with the allowable loads assumed above.

What factors will determine whether non-reinforced brick walls will be used in multi-story construction as the structural framework? They appear to have a sizable bearing capacity, a useful amount of resistance to racking, and a dead weight which can be turned to advantage. The limitation of non-reinforced brick walls in bending must be faced frankly, and the bearing walls so positioned in the structure that their bending participation will be small.

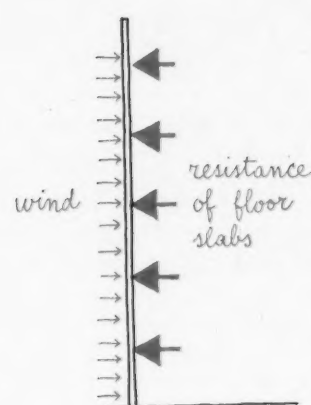
The bearing capacity of 6-in. brick walls is sufficient to sustain apartment



GRAVITY BRICK WALL CONSTRUCTION

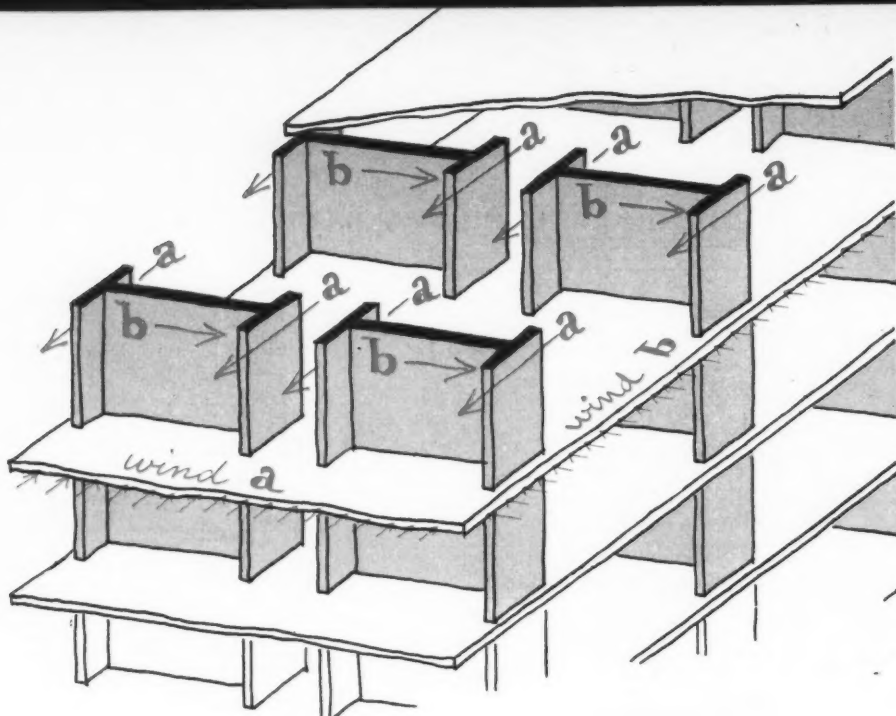


SCR BRICK WALL MULTI-STORY CONSTRUCTION



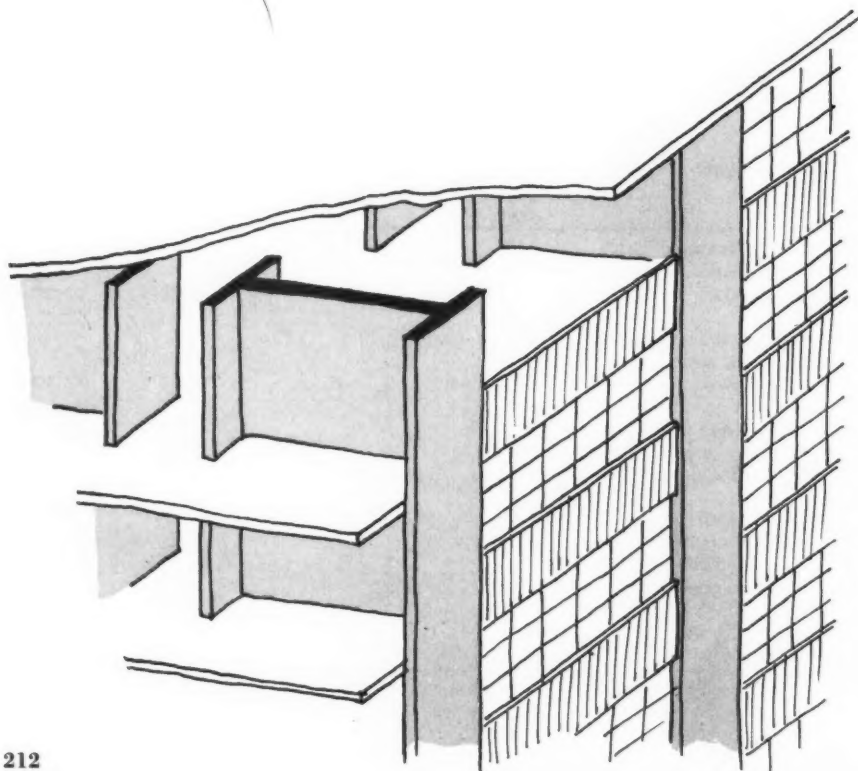
In old-style gravity brick wall construction (which reached its peak in 1891 in the Monadnock Building, Chicago) the exterior wall is designed to resist wind the whole height of the building. The exterior wall also helps to carry the floor load, but the floors give the wall little help in resisting wind load. In the brick wall system of multi-story construction, the exterior walls deliver wind load directly to the floor system at 8 ft intervals, thus minimizing any horizontal loading of the exterior walls

Wall	Compressive Load (height 8'-0") kips/ft	Transverse Load (span 7'-6") lbs/ft	Racking Load (8'-0" by 8'-0" spec.) kips/ft	Wt. lb/ft
AA, high strength brick; cement mortar; excellent workmanship	99.6	46	2.50	96.00
AB, medium-strength brick; cement-lime mortar; com- mercial workmanship	21.0	15	2.50	73.90
AC, medium-strength brick; cement-lime mortar; ex- cellent workmanship	36.2	32	2.50	78.90
From these tests and other published experiments the following predicted strength was prognosticated:				
SCR brick	40.0	20.0 (8'-0" span)	2.0	45.00



Horizontal loading due to wind, from whatever direction it may come, is always transformed, in this construction system, into a racking load (which brick walls can well resist) on the bearing partitions (shown resisting wind b), or on the wing walls (shown resisting wind a) which also add useful buttressing

The curtain wall pilasters become identified with the wing walls of the brick bearing partitions. To provide lateral support and prevent buckling, these pilaster walls should be tied into each floor slab. Three additional ties, between one floor slab and the next, would be preferable for help in resisting wind suction or outward acceleration from earthquake



buildings as high as 15 stories even when the increase in pressure, caused by wind, on the leeward side of the building is taken into account. While 40 kips per ft may seem like a tremendous load for such a slender wall, tests indicate that in heights up to 8 ft, there is no tendency for the wall to buckle — failure is a matter of crushing. Naturally, a 6 in. wall, 15 stories high would buckle under its own weight; however, in the proposed structure the floor provides lateral support every 8 feet.

Assuming that SCR brick walls can sustain an allowable bending force of 20 lb per sq ft over a span of 8 ft, they would appear to be suited for use as curtain walls. Theoretically, they could sustain a 75–80 mph wind with a safety factor of $2\frac{1}{2}$.

Instead of the whole exterior wall being designed to resist wind the full height of the building, as in old-style gravity wall construction, the exterior walls deliver their wind reactions directly to the floor system at 8 ft intervals, thus minimizing horizontal loading on the brick wall.

The floor system must deliver its edge forces from wind loading to the transverse bearing walls which are to be the major structural masonry. It is assumed that friction between floor and wall will be sufficient to transfer this load; for multi-story structures such as we are discussing here, the coefficient of friction of masonry on concrete (assumed to be 0.50) is sufficient to prevent sliding.

Actually, the horizontal loading from wind has been introduced into the major structural masonry as a racking load. SCR brick walls are assumed qualified to resist racking loads of 2 kips per ft.* They can therefore resist the accumulated horizontal load that occurs on the bottom story from wind reactions introduced at each story level above. Since horizontal loads from any direction must be allowed for, longitudinal walls (idealized here as wing walls) must also participate in racking resistance. The buttressing action of these longitudinal walls is especially important for earthquake resistance.

Since this scheme consists of a discontinuous stacking of floor and wall elements, is there any danger that the upper stories would tip, or the whole building overturn? In the case of uniform wind pressure, static forces upon the structure are such that the whole

* The racking test for walls used in home construction under ASTM specifications doesn't simulate accurately the behavior in a multi-story building. Further verification of this figure is planned.

building would overturn before the upper stories would tip over to the leeward side. Resistance to overturning is achieved through dead weight. Provided there is sufficient dead weight to prevent any tension at the base of the building on the windward side, there will be no danger of overturning.

As shown above, loads are delivered to the main transverse bearing partitions through the floor slab. Dead and live loads are transmitted through bearing. Horizontal wind and earthquake loads are transmitted through friction and racking.

Exterior Walls

Before considering the interior walls, something should be said about structural action of the exterior walls. The wind reaction of the curtain wall is delivered to the floor slab.

The curtain wall sustains its own weight. This is carried through pilaster walls to the foundation. Where windows puncture a curtain wall, the spandrel from window head to window sill may be considered as an integral spandrel beam if the lower courses of masonry are reinforced, making a reinforced brick masonry beam. The spandrel from window head to window sill is deep enough — when reinforced — for spans up to 27 ft. The curtain wall should be securely enough tied into the floor slab to withstand outward suction pressure of at least 10 lb per sq ft and, in earthquake areas outward accelerations of at least 15 lb per sq ft.

The reactions of the integral spandrel beam within the curtain wall are to be sustained by the pilaster wall. Since the accumulated dead weight of curtain walls is relatively light, a minimum pilaster width of 3 ft will be sufficient for buildings up to fifteen stories with spandrel spans up to 27 ft. The pilaster wall should be tied at least every 8 ft (at the floor slab) to provide lateral support against buckling. Three additional ties attaching the pilaster to the partition walls (between each floor slab and the next) would be preferable, to help in resisting wind suction or outward accelerations due to earthquake.

Floor Slabs

While floors are not our primary concern here, they must of necessity be discussed since their weight must be sustained by the walls. To predict the loads on the bearing walls, the dead weight of the floor system as a function of the span has been computed. Designs to date indicate that relatively long rein-

forced concrete slabs will resist stress requirements.

Engineers, however, are reluctant to design slabs solely on the basis of stress considerations. In addition to normal deflection there is experimental evidence to indicate that long, thin, reinforced concrete slabs will creep measurably under long sustained loads.

To guard against this possibility an arbitrary limitation of an L/D ratio of 40 was imposed on this design. The minimum weight (as determined by stress) was used to compute frictional and stability limitations; the maximum weight (determined by deflection) was used to compute bearing or equivalent static earthquake loading. In other words, that floor slab weight was used which most severely limited the design.

A live load of 40 lb per sq ft has been assumed in all calculations. Requirements for corridor spaces, dead weight of non-load-bearing partitions, storage areas, etc., have been assumed allowed for in the following manner: Because it is improbable that all floors will be loaded simultaneously, it is customary under most building codes to reduce the live load on vertical elements; therefore, based on the New York, Chicago and San Francisco building codes, our calculations use a reduction factor of 65 per cent for all stories.

Ideally the floor slabs should be so designed as to behave as rigid plates. Where breaks at corridors or doorways occur through the main transverse partitions, the floor plate or slab must not be so flexible that the building acts in resisting horizontal loads as two separate parallel structures, separated by the gap at the opening. The floor must be stiff enough to ensure the full building width will act as a whole in resisting lateral load. This assumption has been made in the graphical forecast of story heights to follow. If the floor is not sufficiently stiff, then in the extreme case of continuous corridors on each floor the predicted story heights may be reduced to roughly 50 per cent.

How Tall Can the Building Be?

A statical analysis of the 6-in. brick walls was made to predict how many of the 8 ft-6 in. stories could be stacked up safely, depending on the spacing of the main transverse bearing partitions and the depth of the building. This prediction was based on the following investigations:

1. The maximum bearing or compressive load on the bottom story.
2. The stabilizing effect of the dead

weight against tipping of the building from wind.

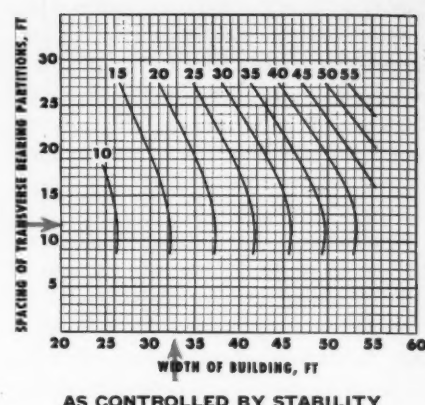
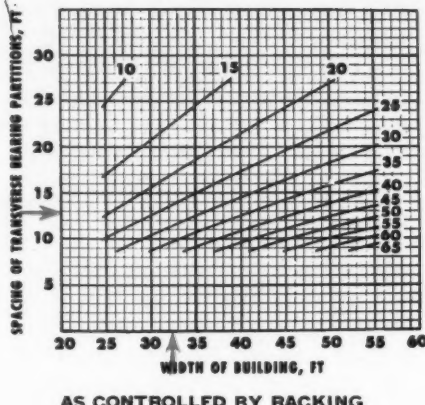
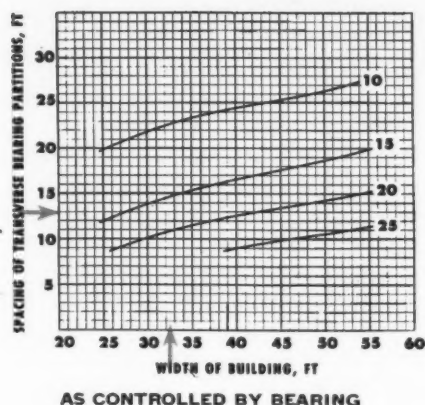
3. The frictional force under each story.
4. The racking load on the bottom story due to wind.

The bearing capacity of the brick walls must resist both the vertical dead and live loads plus the additional stresses resulting from wind or other horizontal loading. The limiting condition for stability has been set by permitting no tension at the windward base. Since the total wind load increases in the same proportion as the dead load, progressing from top to bottom of a building, the coefficient of friction required under each story is theoretically the same; that is, the frictional resistance does not depend on the number of stories. Racking was assumed to be a function only of the wind load and depth of building.

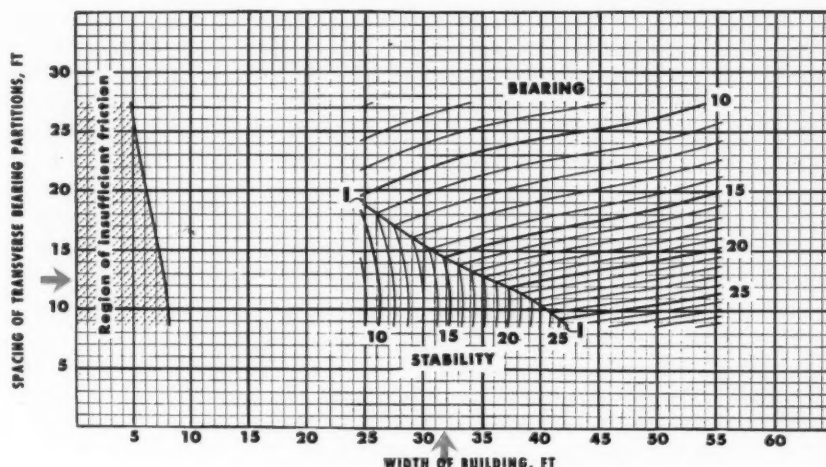
Results of the above investigation have been summarized in the graphs on page 214. All graphs allow for an arbitrary choice of building width and spacing of transverse bearing partitions. On the extreme left of the large graph is the boundary of the region of insufficient friction. Choices falling into this region should not be allowed because the static friction under each story would be exceeded, allowing it to slide. Fortunately, this region is small and away from the usual building proportion.

Bays ranging from 9 to 27 ft have been considered and building widths ranging from 25 to 55 ft. Each curve is the limit of height for a particular set of dimensions, in terms of 8 ft-6 in. stories, to which the building may go before exceeding (1) the bearing capacity of the walls, (2) the stability of the building, or (3) the racking strength of the bearing partitions. Ideally, the most efficient use of material would be when all three curves coincide, so that the limiting conditions are reached simultaneously. However, based on the assumptions made above, bearing and stability are the two controlling factors. It appears that racking does not govern story heights within the building proportions considered here.

The large graph, therefore, is a composite of bearing and stability curves. The stability and bearing surface intersect along line "I". To the left and below this line stability controls; to the right and above this line bearing controls. As an example, if a building were 32 ft deep, with transverse bearing partitions spaced 12 ft on center, then the maximum height of the building would be about 15 stories. It would be 15 stories as controlled by stability, but 18



Static analysis of the brick wall multi-story construction system is summarized in the large graph at right (a combination of the smaller ones above). It will be seen that, for a building 32 ft deep, with transverse bearing partitions 12 ft on center, the maximum permissible height would be about 15 stories. If bearing alone controlled, the limit would be 18 stories; if racking controlled, it would be 27 stories.



ALLOWABLE NUMBER OF 8 FT 6 IN. STORIES IN TYPICAL MULTI-STORY APARTMENT

stories as controlled by bearing, or 27 stories as controlled by racking.

While exact dynamic analyses are most tedious and difficult, West Coast building codes provide the designers with a method for computing horizontal loads which may be applied to the structure statically to produce equivalent seismic effects. Based on the San Francisco Building Code, 1952, and the Uniform Building Code, 1943, an equivalent static analysis was made similar to the above procedure for the 32 ft deep building with bearing partitions 12 ft on center. At the bottom of this page is a tabular summary of results showing the allowable number of 8 ft 6 in. stories:

The unusually high value for racking under the San Francisco code is due to the decidedly lower accelerations provided for in the lower stories. Since earthquake accelerations are more severe in the top stories, the minimum width of building must be 10.6 ft (San Francisco Code) in order to prevent the top story from sliding, as compared to 7.9 ft under static wind load. Vibrations

of the walls themselves are a matter of future study.

Foundations Simplified

This multi-story system simplifies foundation problems where soils do not have much bearing capacity. Instead of the point loading typical of skeleton frame construction, the load is distributed along the partition wall line.

Since continuous footings underneath the main bearing partitions are required, and since, in most apartment buildings, partition walls will be spaced 10-15 ft apart, it is calculated that, with poor soil conditions, the footing of one wall would spread almost half way toward

the adjoining wall. In such cases it would seem advisable to use a continuous mat foundation. This would also provide bearing for the longitudinal walls which, although not receiving gravity loads, must resist horizontal loading from any direction.

Calculations indicate that if a continuous mat is placed underneath a 10-story SCR building, the load intensity on the soil varies between 1000 and 2000 lb per sq ft. Any but the most adverse soil conditions would be satisfactory for this load.

Historical Perspective

The use of load-bearing masonry in

Limiting Condition	NUMBER OF STORIES		
	Static Loading	Earthquake Loading	
		San Francisco Code	Uniform Building Code
Bearing	18	18	13
Stability	15	15	8
Racking	27	71	11

high multi-story buildings, has been practically abandoned since 1891, completion date of the Monadnock Building in Chicago. The exterior masonry bearing walls in this 16-story building were proportioned by a rule of thumb dating back to the Renaissance: a minimum wall thickness of 12 in., with an increase of 4 in. for every story below the top. The result was that the walls of this building measure 72 in. at the base.

No wonder that the skeleton frame — launched to fame in 1883 by William Jenny's Home Insurance Building in Chicago framed in cast and wrought iron — seemed the ideal structural system for building owners who were already sensitive to the amount of expensive real estate occupied by the structural frame, the square feet that paid no rent.

Jenny's creation was made possible by the contemporary development of iron and steel. The application of this new material was aided by the work of bridge engineers whose experience in building metal structures dated back at least 100 years. Laboratory material testing was now possible. Steel fashioned into strong machines tested itself.

The greatest impetus to structural engineering in recent years has been given by the aircraft industry, where the weight-strength ratio is a maddening challenge for precise structural analysis and efficient structural systems. Complete dependence on the beam, strut, and truss soon gave way to the monocoque system, i.e. the skin, or fuselage of the structure, was called upon to be force-resistant. Creators of automobile bodies are aware of this monocoque principle.

Is the building industry going in this same direction? Rumbblings are heard. We speak of rigid diaphragm floors (the flat plate). Cellular, or box-frame, construction of walls — though limited — is a reality. Theoretical tools for analyzing plates, shells, membranes — though tedious at times — are available. Will the contemporary skeleton frame give way to a technique of integrated walls and floors? This multi-story system is a step in this direction.

Masonry construction need no longer be shackled by unreasonable factors of safety. Professor I. O. Baker's "Treatise on Masonry Construction", which had a profound influence on the Chicago Building Code during the reconstruction period after the Great Fire of 1871, recommended a safety factor of ten. This extreme caution was representative of masonry practice throughout the coun-

try at the time when the skeleton steel frame was evolving. This position is not tenable today. The minimum safety factor suggested for unreinforced masonry by the National Bureau of Standards is two and one-half.

Application to Apartments

Almost any common type of apartment plan is well suited to this construction system. The strip plan, typical of walk-up apartments, was selected for our research study because it permitted simple analysis and comparison of different materials and construction methods. Such a plan could be used for three-story garden apartments, or, by piling three such garden apartment units one on top of the other and connecting them with a skip-stop elevator, an efficient high-rise building results (see ARCHITECTURAL RECORD, December 1951, page 138).

Construction Details

Construction details for bearing partitions, exterior walls, insulation, windows, doors, etc. are identical for 1, 3, 10 and 15-story buildings. The reason is that the thickness of all bearing walls is constant throughout the height of the structure.

In cooperation with the Structural Clay Products Institute and the Structural Clay Products Research Foundation, Howard T. Fisher & Associates have developed comprehensive details for use of SCR brick for single-story residences. These details take care of corners, windows, doors, lintels, sills, insulation, through-wall flashing, wiring, lath and plaster, or dry wall finish, etc. and are fully applicable to this multi-story system.

Additional details, especially those required for fireproof floors, stair wells, and fireproof doors to public halls, are now being developed.

Exterior Walls

In contrast to traditional masonry construction, the exterior walls do not carry any floor loads. (The end walls are the single exception; they may be considered as insulated bearing partitions, with window openings kept to a minimum.) The exterior walls are not true curtain walls because they are not supported by the floors.

In some earlier versions of this construction system, the exterior walls were recessed between the floor slabs. However, the pilaster sections were designed to carry the exterior wall load. The dominant reason for setting the exterior wall outside the floor slabs was to reduce the heat loss caused by through-

conduction from floors and bearing partitions.

The space between the edge of the floor slab and the exterior wall is filled with a non-combustible insulating material, which will also prevent the passage of sound and fire.

It is suggested that the inside face of the exterior walls be furred out on 2 by 2 in. wood strips. This prevents moisture penetration, facilitates installation of electric wiring, and allows for 1 in. blanket insulation if this is desired. The furring strips are quickly and easily attached by impaling them on special staples in furring clips which are installed by the mason when laying the wall.

There is a wide choice of insulating materials and plaster finishes for use on such a furred wall. The completed wall may have a U-factor ranging from .15 Btu (1 in. blanket insulation, plus $\frac{3}{8}$ in. gypsum lath, plus $\frac{3}{4}$ in. vermiculite plaster) to .25 Btu. ($\frac{1}{2}$ in. gypsum board with aluminum foil back).

Exposed Brick Interior Walls

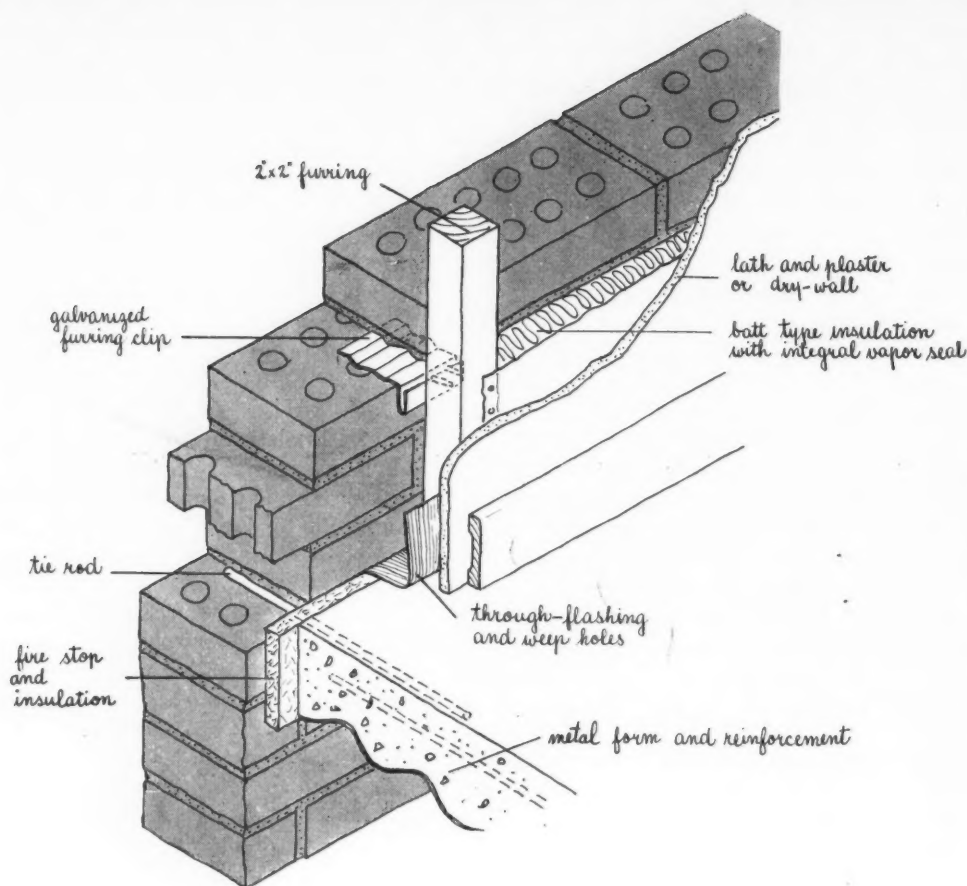
How far it might be desirable to leave the brick partition walls exposed will probably depend upon the location of the wall, the skill of the architect and the variety (size, color, finish, etc.) of the bricks at his disposal; also whether the apartments are subdivided units for low-income families, or competitive, privately-owned rental units.

For kitchens and bathrooms, glazed brick with thin mortar joints would be preferable to plaster, from the standpoint of appearance and sanitary finish; also it would be lower both in first cost and maintenance cost.

Whether brick or plaster were used in the bedroom hall and in closets would make no significant difference to the tenants. The architect's decision in these cases might depend upon whether such walls were required to be bearing partitions.

We do not know what the reaction of local housing authorities would be to apartment designs using exposed brick for interior walls, in living and bedrooms. But the Chicago Housing Authority, who are interested in this HHFA research project, have indicated that they would accept unplastered brick throughout, if it would reduce construction and maintenance costs.

Fire prevention experts are particularly eager for a surface such as exposed brick which does not require painting; for paint can be the means of spreading flash fires.



Suggested construction detail at joint between floor slab and outside wall in the brick wall story construction. Floor and wall are connected at intervals by tie rods, but they are structurally independent and separated one from the other by a layer of insulation. The furred wall shown (U value, including brick, 0.15) is but one of many possibilities

Fire Resistance

Fire tests have not yet been run on a 6 in. brick wall comparable to one made of SCR brick. However, it seems probable, by interpolation of test results gained from 4 in. and 8 in. masonry walls, that the SCR brick wall, unplastered, will have a 2 hour rating, and with furring, lath and plaster on one side a rating of over 4 hours.

Sound Isolation

A high degree of sound isolation is a useful by-product. Theoretical analysis indicates that the 6-in. brick wall without plaster should have a sound attenuation of slightly more than 45 decibels. This is considered satisfactory for dividing walls between one apartment and the next, and it is far above minimum requirements for the partition walls within each apartment.

Construction with SCR Brick

One outstanding advantage possessed by the SCR construction system, when compared with most other new systems, is the immediate and nation-wide availability of the units employed. No special equipment or experience is required for installation; SCR bricks can be laid by any bricklayer.

Resistance to Shock

How would a 10- or 15-story apart-

ment house, built with unreinforced walls of brick behave if subjected to earthquake or atomic blast? Probably the best method of analysis available to the practicing engineer is the use of equivalent static loading, as required by the San Francisco Building Code. Exterior wall bearing masonry buildings at Hiroshima and Nagasaki showed evidence of total collapse. It must be remembered, however, that conventional practice has been primarily to place the major structural masonry on the outside of the building where it is most vulnerable to the bending effects of blasts, wind, or other horizontal loading. Seldom have masonry structures been deliberately engineered to take full advantage of the racking resistance of brick walls in withstanding horizontal loads.

Besides using the dead weight of the brick wall to stabilize the structure and provide useful frictional forces, we position the walls in a multi-story structure so that they will participate in bearing and racking without severe transverse effects.

Conclusion

Before this construction system can be recommended for actual use, certain additional tests must be conducted, and it is assumed that it would be first tried

in numerous smaller structures before larger projects are undertaken. The Structural Clay Products Research Foundation intends to continue theoretical and experimental development with the hope that a pilot building can be erected in cooperation with the Housing and Home Finance Agency and one of the municipal housing authorities.

Architectural Record Report No. 3 on Housing and Home Finance Agency Research Project No. 1-T-99 with Illinois Institute of Technology*

* This article is based on a progress report on Housing and Home Finance Agency's Research Project No. 1-T-99 being conducted under contract by Illinois Institute of Technology, Prof. E. I. Fieseneiser, Project Director; Howard T. Fisher & Associates, Inc., Architects and Industrial Designers, Sub-contractor; Chicago Housing Authority, Collaborator.

The construction system presented here is a development of the Structural Clay Products Research Foundation, Robert B. Taylor, Research Director. It is the result of that organization's cooperative participation in advancing the research objectives of HHFA Project No. 1-T-99. The research and development work was performed for, and at the sole expense of, the Structural Clay Products Research Foundation by Howard T. Fisher & Associates, Inc. and Armour Research Foundation of Illinois Institute of Technology. The basic concept was developed by Robert L. Davison in September 1950. Formulation of an engineering philosophy was undertaken by Clarence B. Monk in September 1951, based upon the use of "SCR Brick" (Registered Trademark SCPRF: Patents Pending).

The accuracy of all statement or interpretations is solely the responsibility of the authors. Statements may be altered by further investigation.

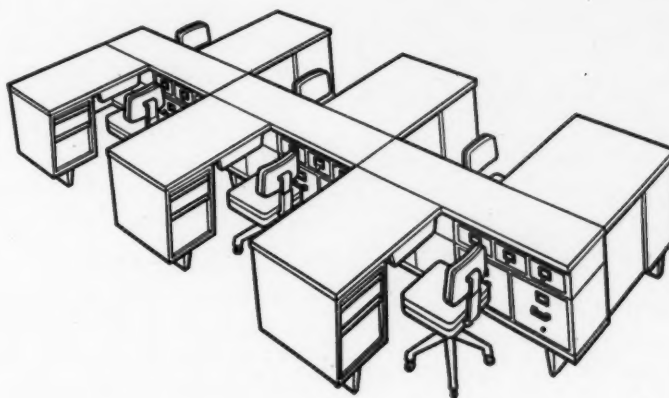
PRODUCTS for Better Building

Modular Office Furniture

Designed primarily as a space-saver, but also to afford time-saving efficiency and less clutter in an office, the *Globe-Wernicke Techniplan Modular Office* system is reported to have had successful installations, after having been on the market for less than a year. Consisting of adjustable working surfaces combined with optional partitions, the group also includes various standard sectional units, such as letter files, map and visible record cabinets, and card index cases. Cutting down waste space and adding flexibility, the units make for better organized and improved working facilities. Units are readily interchangeable due to an interlocking key-hole slot principle. Anyone with an ordinary screw driver can assemble them.

Electric wire channels can be run along the top of the partitions so that electrically operated machines may be placed at desired locations. Fluorescent lighting fixtures are attached to the bases of bookshelves, giving added light for detailed work. The Globe-Wernicke Co., Cincinnati 12, Ohio.

Sectional units of office equipment may be assembled in many ways to provide maximum floor space and increased efficiency. Built-in bookshelves and racks for waste baskets are an added attraction



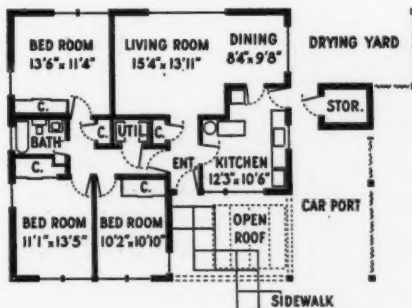
Air Conditioning Package For Low-Cost Housing

The first houses have been completed for a 210-unit development in Dallas which will reportedly be the first large-scale, low-cost housing project in the country to include complete year-round air conditioning. Designed by George N. Marble, architect, the six-room houses are planned around a new *General Electric* packaged air conditioner tied by a common duct system to a *G-E* warm-air furnace. Both are located in an enclosed central alcove where they can furnish cold or warm air directly into surrounding rooms through a minimum of duct-work. The project is being built by the combined firms of Laughlin & Silver and Lewis & Lamberth, who expect to market the houses for about \$12,500. The combined air conditioning and warm-air heating system totals only about 8½ per cent of the cost of the complete house, and annual cost of operation is said to be equally low. The system provides year-round comfort for homes, furnishing

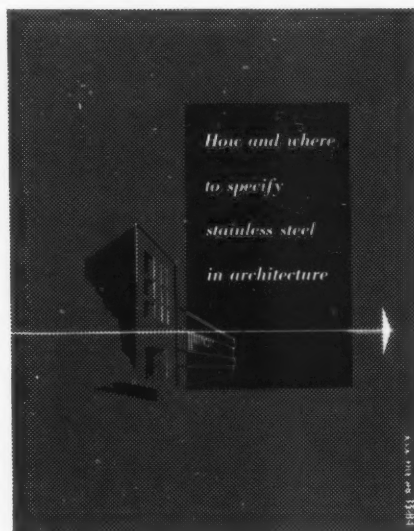
(Continued on page 252)



Typical house in new project (above) is planned (below) around centrally located system with packaged air conditioner and warm air furnace (right)



LITERATURE FOR THE OFFICE



Booklet lists over 300 general and specialized applications for stainless steels in construction of many building types

Stainless Steel Applications for Building

How and Where to Specify Stainless Steel in Architecture. Booklet describes types of stainless steels, giving analyses and representative physical and mechanical properties; lists forms and finishes of mill products and types of fabricated products available; shows in tabular form over 300 individual applications for stainless steel in major areas of buildings, including specialized installations. A specification guide is included. 20 pp. United States Steel Co., Pittsburgh, Pa.*

Fire Protection For Moving Stairways

Fire Resistance of Shutters for Moving-Stairway Openings. National Bureau of Standards Building Materials and Structures Report 129. Booklet describes results of one exploratory and two full-scale fire-endurance tests of flexible rolling shutters for closing of moving stairway openings. Photos, graphs and details are included. 9 pp., illus. Price 10 cents. Supt. of Documents, U. S. Govt. Printing Office, Washington 25, D. C.

* Other product information in Sweet's File 1952.

Tool Steel Reference Manual

Tool Steel Handbook. Designed for engineers, teachers, metallurgists and others interested in tool, die and allied steels, this comprehensive volume is a companion to the previously published "Stainless Steel Handbook" and "Strength of Stainless Steel Structural Members as Function of Design." Contents include charts and tables of data on properties, analyses and applications, descriptions of important grades, discussions of heat treating and handling techniques, information on forms, finishes, weight tables, and other material. 197 pp., illus. Allegheny Ludlum Steel Corp., 2020 Oliver Bldg., Pittsburgh 22, Pa.*

Linoleum Products

1952 Gold Seal Pattern Book. Catalog contains information on entire line of floor and wall coverings, as well as maintenance equipment and suggestions for proper treatment and care. Photographs of all installation equipment are given and product specifications are included. Full page color illustrations of rugs, by-the-yard Congoleum, Congowall, inlaid linoleum (plain and vinyl), asphalt tile, Nairnboard, bulletin board cork and linoleum borders present a pictorial description of various patterns and colors. 208 pp., illus. Congoleum-Nairn Inc., 195 Belgrove Drive, Kearny, N. J.*

Handbook for Homemakers

Everything in it is You. Booklet by Francis DeN. Schroeder gives the reader a brief but adequate sketch of the various periods in the history of furniture design. Drawings help to illustrate examples of each period discussed. Average sizes for bedroom, dining and living room furniture are shown — using a scale of ¼-in. equals one ft. The chapter on colors includes many helpful suggestions and a handy color wheel containing primary, secondary and tertiary colors. Chapters follow on wall, window and light treatment and suggestions for proper use of pictures and accessories conclude the book. 32 pp., illus. Available for 10 cents at John Widdicomb Co., 101 Park Ave., New York, N. Y.

Slide Type Fire Escapes

Potter Slide Type Fire Escapes. Brochure shows variety of typical installations of the manufacturer's tubular and spiral escapes, both interior and exterior. Specifications for both types are given and detail drawings are included. 8 pp., illus. Potter Fire Escape Co., 6107 N. California Ave., Chicago 45, Ill.*

Reflective Insulation

(1) *Alumiseal Reflective Insulation and Vapor Barrier Materials;* (2) *Alumiseal with Aluminized Finish for Walls and Ceilings.* Booklets illustrate features, construction details and typical installations of the manufacturer's insulating material. Specifications are included. 12 pp., 4 pp., both illustrated. Engineering, Design and Installation is done by C. T. Hogan & Co., Inc., Manufacture is by Alumiseal Corp., both of 383 Madison Ave., New York 17, N. Y.

Portable Equipment for Fire Fighting

Rockwood Fire Fighting Products. The manufacturer's line of products for extinguishing fires — including nozzles, valves, applicators, hand lines, pipe, adapters, clips, and chemicals — is illustrated in this catalog. Descriptions of operation and capacities are also listed. 10 pp., illus. Rockwood Sprinkler Co., 38 Harlow St., Worcester 5, Mass.

Heating and Air Conditioning

Trane Products, Bulletin No. PB-290. The first complete condensed catalog of the manufacturer's line of air conditioning, heating, ventilating and heat transfer equipment to appear in five years, this booklet supplements some 40 specialized bulletins on the various products shown here. Each is here described and illustrated with photographs of units and component parts, cutaway drawings and construction features. Condensed tables showing capacities, sizes and dimensions are also included. 34 pp., illus. Trane Co., La Crosse, Wis.*

(Continued on page 304)

Anemostat Type C-1

ADJUSTABLE Air Diffuser



*Just "Turn-a-kone"
for the air pattern
you want!*

Anemostat's Type C-1 air diffuser is *easy to adjust*—simply "Turn-a-kone" to vary the air pattern from horizontal to vertical discharge. No tools, no screws, no fussing, no fiddling. Changing pattern does not affect balance of system.

The Type C-1 Anemostat air diffuser is *easy to install* on exposed duct or flush to ceiling. The snap-in assembly cuts installation time two-thirds. It has clean, handsome, concentric lines that add to ceiling beauty, blend into your design motifs. It provides true *draftless air diffusion*, eliminates stale air pockets, equalizes temperature and humidity.

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TELEPHONE SYSTEMS FOR HOSPITALS: 1

FIG. 1 AERIAL SERVICE ENTRANCE IF REQUIRED

Consult Telephone Co. in order that entrance may be located as near as possible to main cable system. Also that fuse protection requirements may be considered.

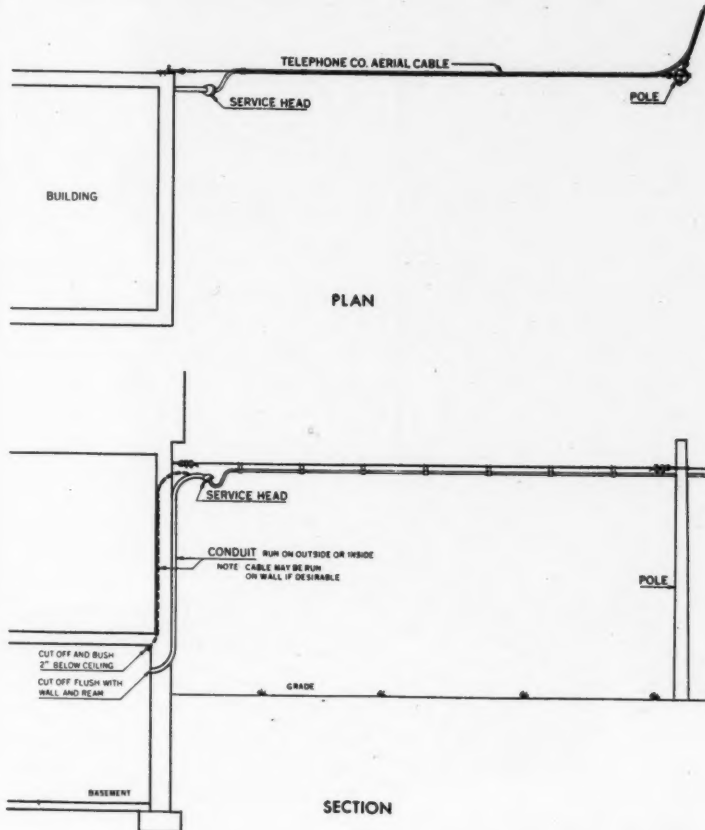
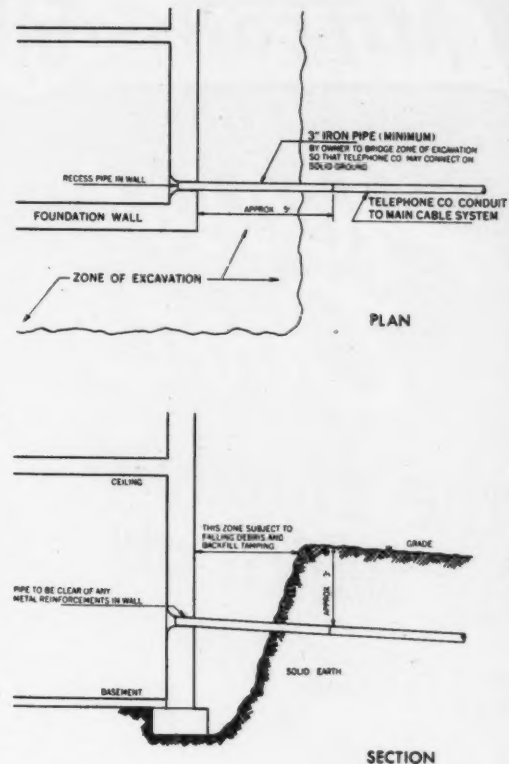


FIG. 2 UNDERGROUND SERVICE ENTRANCE



The following sheets have been adapted from *Telephones In The Hospital*, prepared by Noyce L. Griffin, Electrical Engineer, Public Health Service, Division of Hospital Facilities. The telephone company should be consulted for exact requirements.

General

Interconnecting telephones should be provided for all departments, operating and delivery suites, offices, and an elevator outlet at mid travel level. All telephones may be connected on a dial system which permits interior communication without calling hospital switchboard. Telephone jacks should be installed at all private and semi-private beds. Public pay stations should be provided for visitors and personnel. Rigid conduit or electrical metallic tubing should be installed for all wiring. Surface wiring should be avoided. Construction plans should

show all facilities listed below as approved by local telephone co. Symbols should conform with "Graphical Electrical Symbols for Architectural Plans", Z32.9 as approved by the American Standards Association. Building owner provides conduits, wire terminal boxes, space for equipment; telephone co. furnishes and installs all wiring and equipment.

Facilities which carry cables from telephone co. to building, and wiring in building include:

1. *Service Entrance*: location determined by architect and telephone co. so entrance cable will be:

a. Well removed from: electric light, power circuits, apparatus; gas or water pipes, foreign metallic objects; boilers, steam pipes, engine exhausts.

b. Free from possibility of mechanical injury, coalbins, ash pits, elevator shafts, coal or freight chutes. Avoid proximity to storage for flam-

mable materials.

c. Accessible to most satisfactory route to main cable terminal cabinet or frame, or to foot of riser shaft or conduit.

d. Attached to walls or ceilings, not to partitions which may be changed.

e. Unobjectionable in appearance.

In masonry construction, conduit stubs or pipe sleeves should be cast into wall, or a hole left for later installation. Provision should be made for quick installation of emergency service.

Where service is brought into building underground, conduits should drain away from building toward a manhole or pull box and extend at least 5 ft beyond foundation wall to firm earth. Telephone conduits should be separated from electric light and power conduits by not less than 3 in. of concrete, 4 in. of brick masonry, or 12 in. of well tamped earth. (See

Milcor Style K Access Door — Note exclusive hinge design which permits door to open 175° for easy work entry. Number of hinges and cam locks is determined by size of door.

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MILCOR Access Doors install flush to the wall or ceiling — almost invisible — yet provide instant access to key points in piping and wiring systems. They blend with finished surface — just paint or paper right over them.

Low cost installation requires no special framing, no cutting or fit-

ting. Three types available for use, with plaster, masonry or wall board.

Quality design and construction make Milcor Access Doors the standard by which all others are judged. Specify them on *your* next job. Consult your Sweet's File, or write for complete information.

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TELEPHONE SYSTEMS FOR HOSPITALS: 2

FIG. 3 MAIN CABLE TERMINAL FOR SMALL INSTALLATION

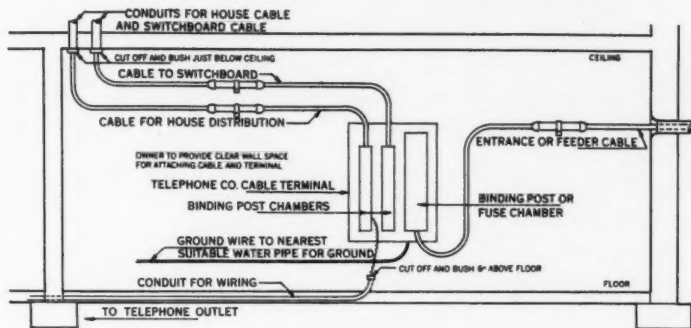
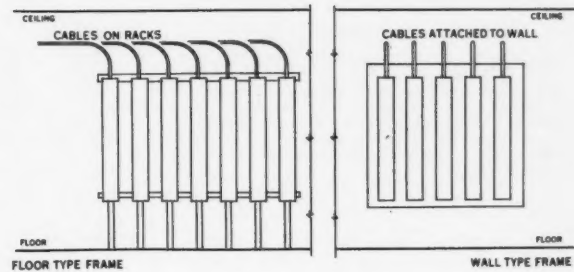


FIG. 4 FRAME FOR LARGER INSTALLATIONS



Figs. 1 and 2.)

2. *Main Cable Terminal Cabinet or Frame* provides means for: (a) terminating wires of cables from telephone co.; (b) terminating wires of building cables; (c) interconnection of wires so telephones may be connected and changes made.

Terminal frames are generally furnished and installed in a metal cabinet by telephone co. Preferable location for terminal cabinet is dry, clean, accessible, well ventilated, near to service entrance. (See Figs. 3 and 4.)

3. *Switchboards*: connection of telephone service to trunk lines is accomplished by a Private Branch Exchange (P.B.X.) switchboard. There are two types suitable for hospitals:

a. *Manual System*: All connections between stations or between any station and central office trunks are established manually by operator at switchboard. Use of this system is generally limited to small hospitals.

b. *Dial System*: Incoming calls, toll calls both in and out, information service, and transferring calls are handled by operator at switchboard. Outgoing calls and station-to-station calls inside hospital are handled by automatic switching equipment. In the average hospital, use of automatic switching equipment is generally more economical and efficient. More space is required for automatic switching equipment, which is quite heavy and requires a separate room for protection against dust, excessive moisture, etc. Telephone co. should be consulted as to space and floor loading requirement.

Floor space required for switchboards will vary slightly with different types. In estimating, allow about 2 ft 3 in. wide by 3 ft deep for

each section of switchboard. (See Figs 8 and 9.)

4. *Vertical Riser Conduits*: in buildings of moderate height and where building cables are small, riser cables are usually installed in conduits in lieu of riser shafts.

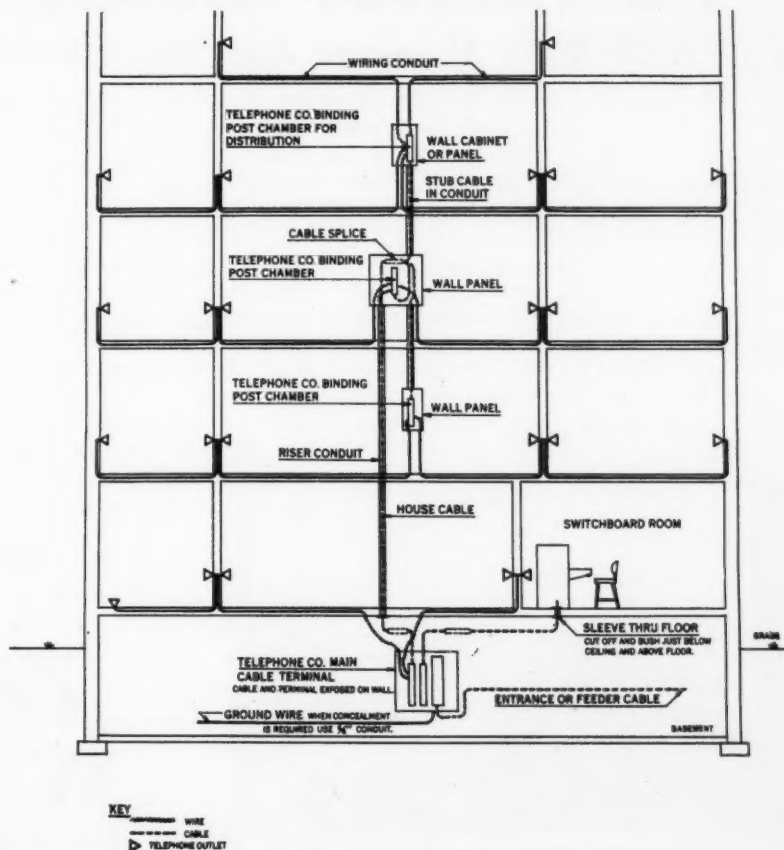
5. *Splicing Closets*: in multi-story buildings, wires must be taken from cables for connection of telephones for each floor. Wires are brought out

in a splicing closet and connected to a terminal strip. Where riser shafts are used, splicing closets are normally provided on each floor. Where riser conduits are used, as in most hospitals, splicing closets may or may not be required on every floor. (See Figs. 5 and 6.)

6. *Distribution Terminal Cabinets*: branch cables from splicing closets are connected to terminal strips in

FIG. 5 VERTICAL TELEPHONE RISER CONDUIT AND WIRING DIAGRAM

Conduit sizes will be determined by number of wires or diameter of cables. Panel sizes will be determined by type of equipment to be installed.

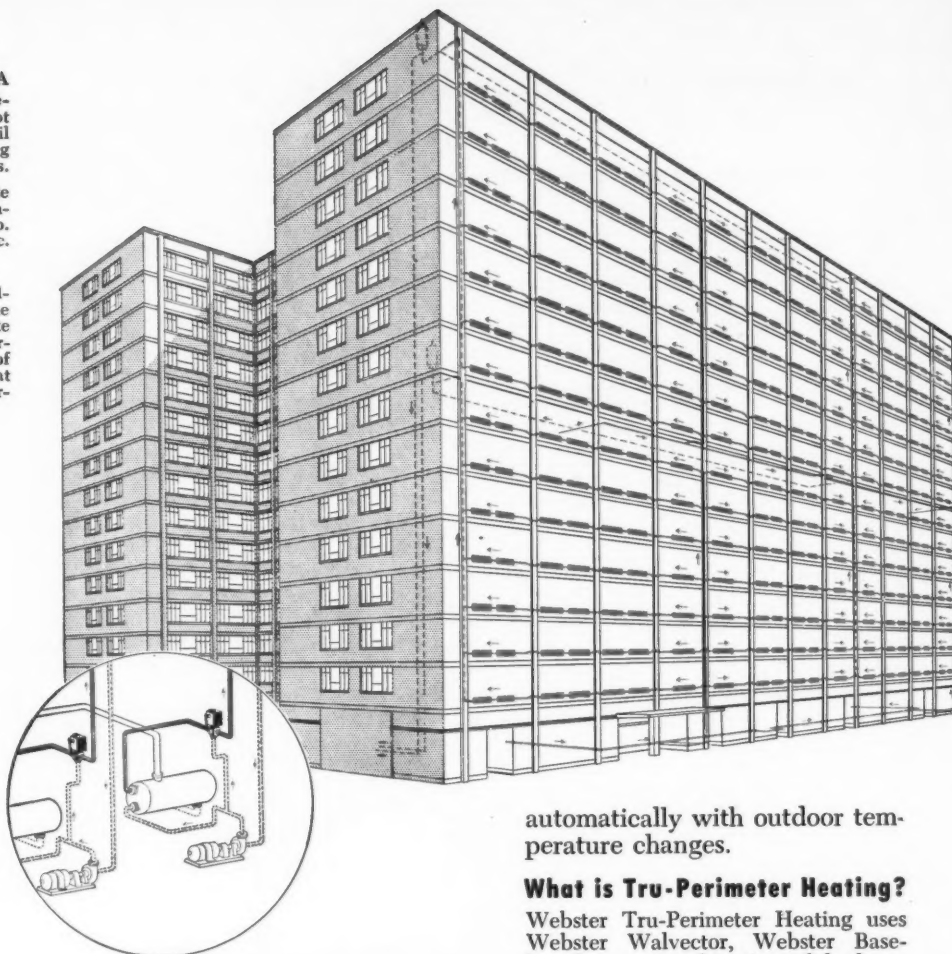


FLAMINGO APARTMENTS
1220 N. BROAD ST., PHILADELPHIA
Diagrammatic view showing piping arrangement for Webster Tru-Perimeter forced hot water heating. Inset shows basement detail with heat exchangers, pumps and mixing valves for Webster Continuous Flow Controls.

Architect: John H. Graham, A.I.A. Associate
Architect: Sweet and Schwartz, A.I.A. General Contractor: Turner Construction Co. Heating Contractor: Benjamin Lessner Co., Inc.

MECHANICAL DESIGN NOTES

Only four risers across entire front of building. Two-zones—one serving floors 2 to 8, the other floors 9 to 15, each with separate Webster CF-2 Control and Outdoor Thermostat. Each zone vented to tank at top of zone—no individual room vents. Two heat exchangers and circulating pumps all interconnected.



Perimeter Heating For 15-Story Flamingo Apartment Building

Webster Tru-Perimeter Heating with series-connected Webster Walvector and Webster-controlled continuous flow hot water heat provided the designers of this ultra-modern building with comfort heating and attractive interiors without sacrifice of many novel building construction features contributing to low cost. Consider these features:

(1) Economy construction. No hung ceiling, no furred columns to conceal piping.

(2) Supply and return risers concealed in partitions at convenient column locations; less than half the risers required in conventional piping.

(3) All connections concealed in continuous Walvector enclosures (see photo), customary runouts completely eliminated.

(4) Neat, attractive, out of the way, matches modern architectural style.

(5) Continuous draft-free, mild heat blanketing the almost all-glass exposure. Water temperature varied

automatically with outdoor temperature changes.

What is Tru-Perimeter Heating?

Webster Tru-Perimeter Heating uses Webster Walvector, Webster Baseboard, or a combination of both, to replace the heat at the perimeter where heat loss occurs. Heating elements are mounted close to the floor along outside walls, spreading the heat the entire length of the exposed walls.

Webster Tru-Perimeter Heating warms the air within a room, warms the floors and warms the inside surface of outside walls where a normal coolness occurs during winter months. Gently moving warm air is drawn to floor level and across the floor into the inlet opening of the radiation. Radiant heat rays strike the floor along the full length of the exposed wall. Floors are warm and comfortable even with slab floor construction.

Webster Tru-Perimeter results are obtainable with either forced hot water or Moderator controlled low pressure steam heating. For further information about Webster Tru-Perimeter Heating for a new building or modernization see your Webster representative or write us.

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Webster
WALVECTOR
For Steam or Hot Water Heating



Living room in typical apartment showing Webster Walvector.

TELEPHONE SYSTEMS FOR HOSPITALS: 3

FIG. 6 TELEPHONE RISER AND WIRING DIAGRAM

Using splicing closets when available and desirable

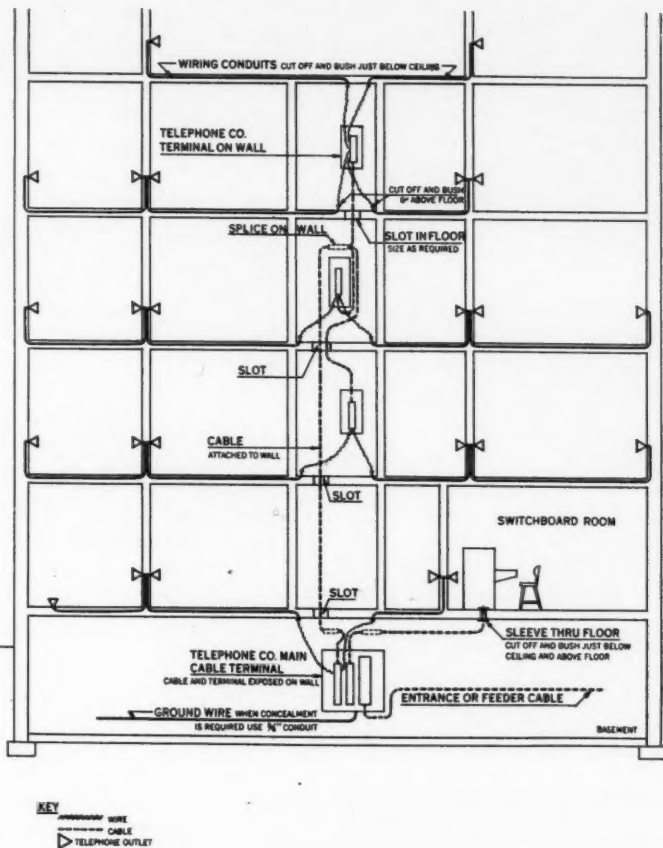
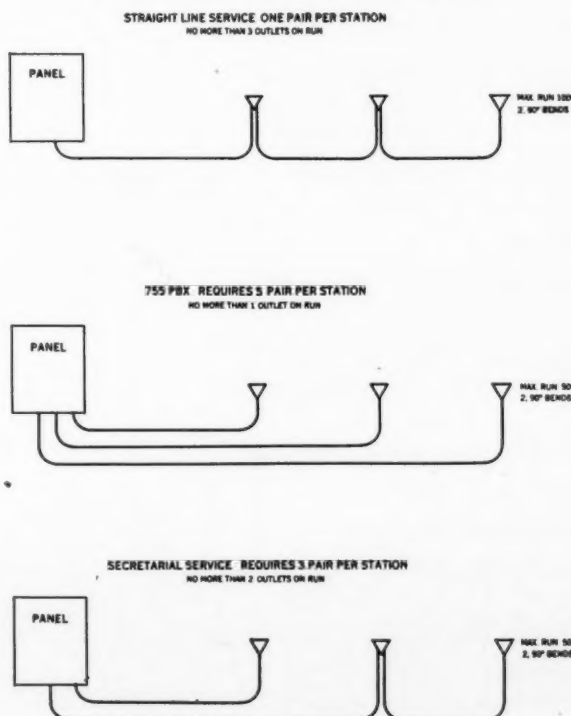


FIG. 7 CONDUIT FOR INSIDE TELEPHONE WIRES

Rigid conduit or electrical metallic tubing to be used



distribution cabinets, and from these, individual telephones are connected. Cabinets should be in accessible locations on each floor, near to center of areas they serve.

7. *Branch Conduits* for cable or wire runs should not be filled to more than 40 per cent capacity to allow for replacements or additional service. Where more than two 90 deg bends are necessary in a run, pull boxes should be installed so no section will have more than two bends. Runs between pull boxes should not exceed 100 ft for cable, 50 ft for wire. (See Fig. 7.)

FIG. 8 DIAGRAM OF SWITCHBOARD AND CONDUIT LOCATION

When board is serviced from switchboard room

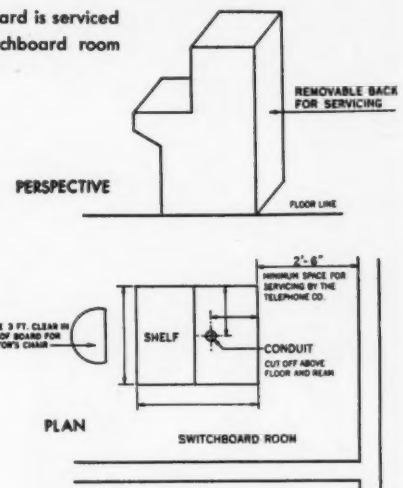
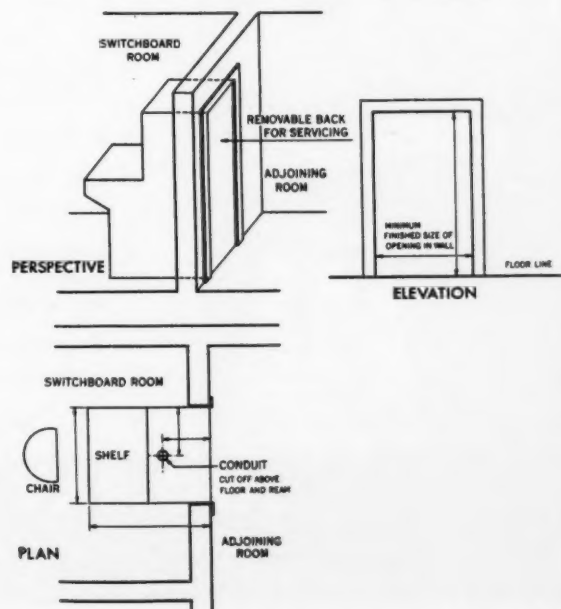


FIG. 9 DIAGRAM OF SWITCHBOARD AND CONDUIT LOCATION

When board is serviced from an adjoining room

Note: Correct dimensions may be obtained from the telephone co.



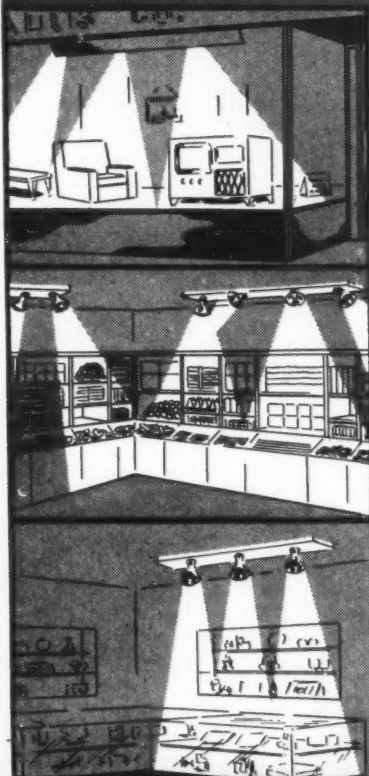
THE HIT OF THE SHOW

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The first . . . the only . . . complete compact shallow unit—swivel sockets inbuilt in strip. Finger-Tip adjustment—swivels 90° in all directions through a complete 360° circle. Stays put at any angle.



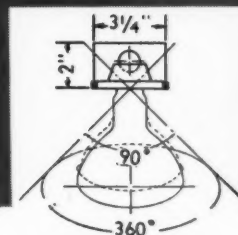
For Window Lighting, Rug Displays, Stock Bins, Jewelry Counters, Wall Cases, Murals, Floor Displays, Signs, etc. Ideal for anything that calls for highlighting.

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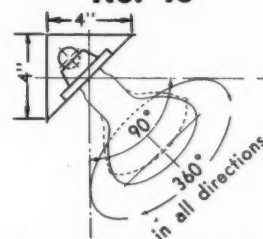
EXAMPLE: For 47 ft. . . 5-8 ft. lengths
1-5 ft. length
1-2 ft. length

- Sockets wired 12" center to center, start 6" from end.
- K.O.'s on top and ends.
- Can be suspended with our No. 10 Hanging Assembly.
- Low cost installation—one Roto-Strip with 8 sockets installed in same time as single ordinary socket.
- Rugged one piece high temperature resistant socket.

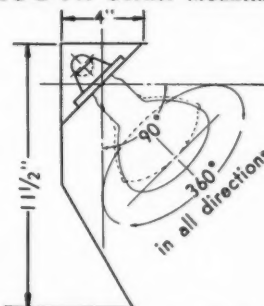
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ARCHITECTURAL PORCELAIN ENAMEL: 1—Basic Design Data

This is the first of a series of Time-Saver Standard Sheets on porcelain enamel, prepared with the cooperation of the Porcelain Enamel Institute and its manufacturer members, and especially of D. C. MacDonald of Industrial News Service. Subsequent sheets will include additional design and fabrication limitation data, attachment methods, and notes on the design and attachment of sign letters.

Architectural porcelain enamel is made of iron or sheet steel panels covered with a glass coating which is fused into the metal at temperatures up to 1800 F. The coating is fused to the base after forming. Almost any desired shape can be made by forming, stamping, deep drawing or welding; a number of typical shapes that can be obtained are illustrated below.

Porcelain enamel is an inorganic, mineral composition that is very durable, easy to clean, acid resistant, weatherproof and non-inflammable. Its uses include a wide variety of interior and exterior wall surfacings, trims and signs.

Proper designing and fabrication are extremely important in producing satisfactory finished panels. To develop in the panel the strength required to withstand the repeated fusing operations, attention must be given to many factors, such as proper gage of metal, size and shape of piece, correct method of forming, rigidity, holes for hanging, etc. Close cooperation between the designer and those responsible for the fabricating, enameling and assembly of the parts is necessary to avoid processing difficulties.

In general, a designer should keep in mind the following points:

1. Make all designing of products

a cooperative job between designer and enameler.

2. Select sheet metal of the proper gage and working properties.

3. Keep shapes as simple as possible.

4. Keep sizes proportionate. Avoid long, narrow shapes.

5. Avoid unsymmetrical embosses and offsets.

6. Use flanges for strengthening where necessary. A 1-in. depth is standard size; less is usually not recommended.

7. Weld flanges at corners.

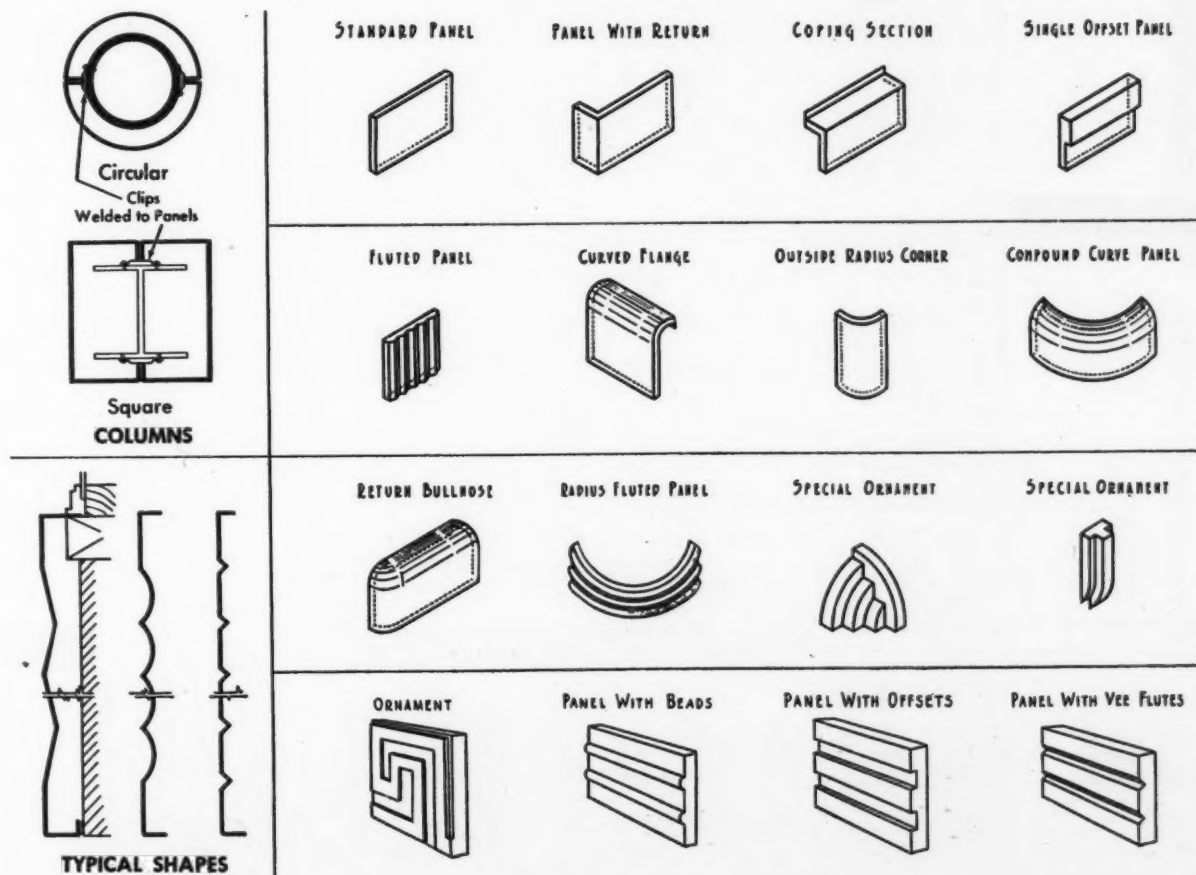
8. Avoid cutouts in flanges.

9. Avoid cutouts in body of parts wherever possible.

10. Provide holes for hanging during firing. Such holes should be spaced to give uniform weight distribution.

11. Keep double thickness of metal to a minimum.

12. Avoid large angle reinforcements welded to back of parts.



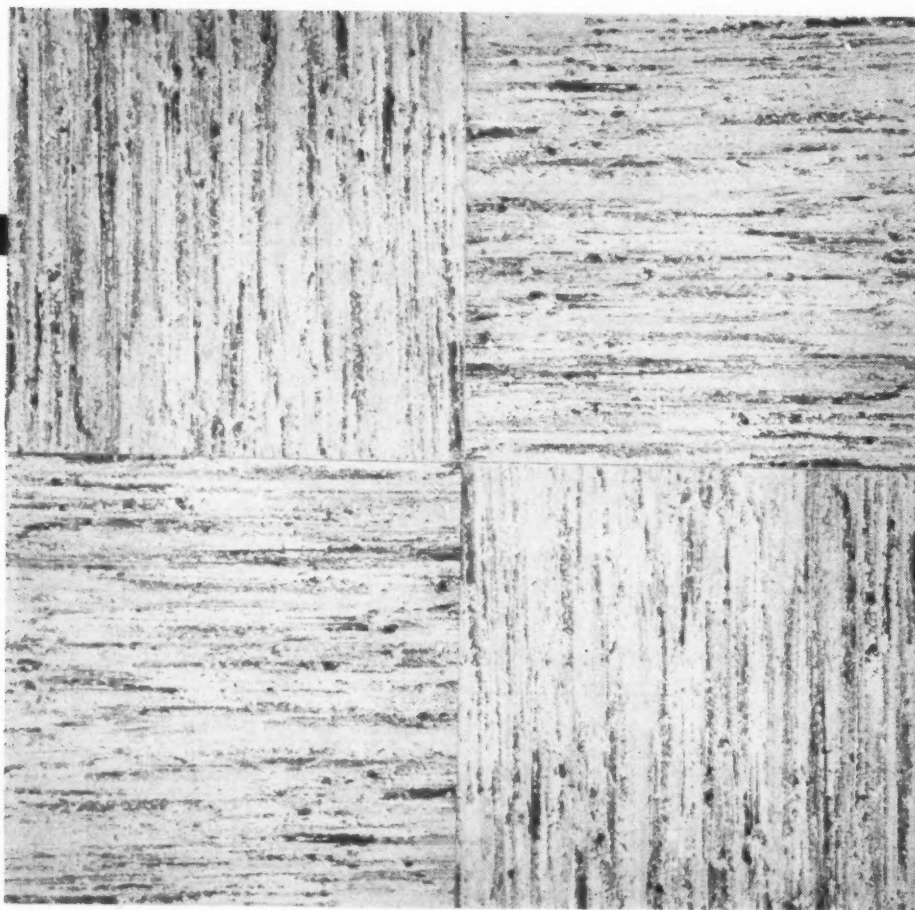
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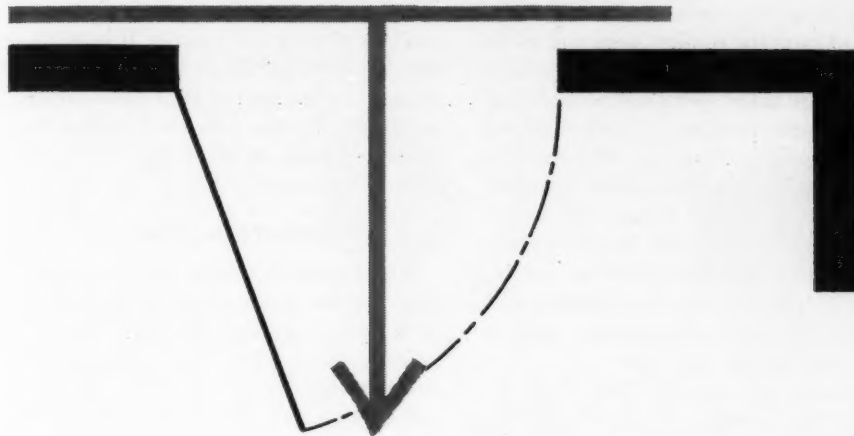
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Here's wonderful news . . . a floor that meets a very real need in today's houses: genuine *inlaid linoleum* . . . for installation over concrete *on-grade*. It's Gold Seal Ranchtile Linoleum . . . designed to sweep right through every room of every new ranch-style house. After exhaustive proving tests . . . Congoleum-Nairn has developed Gold Seal Ranchtile . . . and *guarantees* it with their famous money-back guarantee of satisfaction.

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Kearny, New Jersey. Makers of guaranteed floor and wall coverings: Gold Seal Nairn Inlaid Linoleum • Gold Seal Congowall • Gold Seal Vinyl Inlaids • Gold Seal Congoleum • Gold Seal Asphalt Tile. "Gold Seal" is a registered trade-mark. © 1952, Congoleum-Nairn Inc.

BUILDING THE ONE-STORY HOSPITAL

(Continued from page 206)

4. WALL CONSTRUCTION

The walls should provide a sanitary, durable, safe and comfortable enclosure. Suitable vapor barriers and thermal insulation should be incorporated to eliminate excessive heat loss as well as within-the-wall condensation, especially where there is apt to be a wide differential between indoor and outdoor temperatures and humidities.

The structural framing should be independent of wall and window construction. There are many benefits: (1) overall construction time will be shortened. (2) all erection and heavy construction activity associated with the structural frame will be done at one time, thereby eliminating delays caused by waiting for allied work to be completed. (3) the roof may be erected at an early date, providing protection for all subsequent work. (4) if columns, beams and slabs are in place, the other trades will be able to move right in and finish their work without interruptions ordinarily caused by piecemeal structural framing.

Although the sketches indicate structural columns within walls, load bearing masonry piers may be economically superior in certain geographical areas.

The cavity shown in the wall construction of Fig. 3 provides (1) a mois-

ture barrier and (2) thermal insulation.⁴

Window details. To obtain optimum daylight for the bed patient farthest away from the exterior wall, it is desirable to raise the window head and make it flush with the ceiling line. Natural ventilation of the rooms will be increased if the upper portions of such windows can be vented. The use of extensive window areas provides added cheerfulness in the patient areas and better working conditions in the service rooms. Continuous windows which do not tie directly into the structural framing can be detailed with standardized connections at columns and walls.

Setting the windows flush with or projecting slightly outside of the exterior face of the wall provides some features also worth considering. Elimination of the exterior sill removes a point of water leakage into the wall. Many fine buildings are seriously stained by dust and soot which collects on the window sills and is washed down the face of the buildings by rain. Finally, the apparent size of a room may be materially increased by locating the windows as outlined above.

A hollow type, non-load bearing, interior partition is desirable to permit the

installation and concealment of pipes and ducts without exterior projections. They can permit future alterations and space rearrangement with a minimum amount of work and trouble. If possible, the interior partitions should be arranged to allow part or all of the columns to be within the wall construction in order to reduce or eliminate projecting corners, as shown in Fig. 4.

5. ROOF CONSTRUCTION

The decision between a flat or pitched roof outline is governed by individual preference more than by functional requirements (See Fig. 1). Recent experience indicates many advantages in providing a roof structure which will span between exterior walls without intermediate support.

The elimination of parapet walls (See Fig. 3) does away with many roof flashing details which are not only expensive to install but also quite expensive to maintain. Simpler and lighter structural lintels over all exterior wall openings can be used when a heavy parapet wall is omitted. The roof overhang can easily be extended for protection from rain and sun.

A construction scheme which results in a flush ceiling surface is desirable for several reasons. The work in applying ceiling finish materials is reduced. Overhead piping and ductwork can be readily installed without the interference of beam and girder projections. Insulation and vapor control measures can be more positively installed in straight ceilings. Interior walls and partitions are more easily erected with a minimum number of offsets and projections.

Where the roof construction includes a substantial attic volume, it is best to apply the insulation at the ceiling line to reduce the heating load. Proper ventilation of attic spaces is necessary, but suitable baffles and fire stops should be installed as safety measures.

6. ACOUSTICS

Some of the new materials being used in today's structures tend to increase the problems involving sound control, and the general application of sound absorbing finish materials is not a panacea for noise.⁵

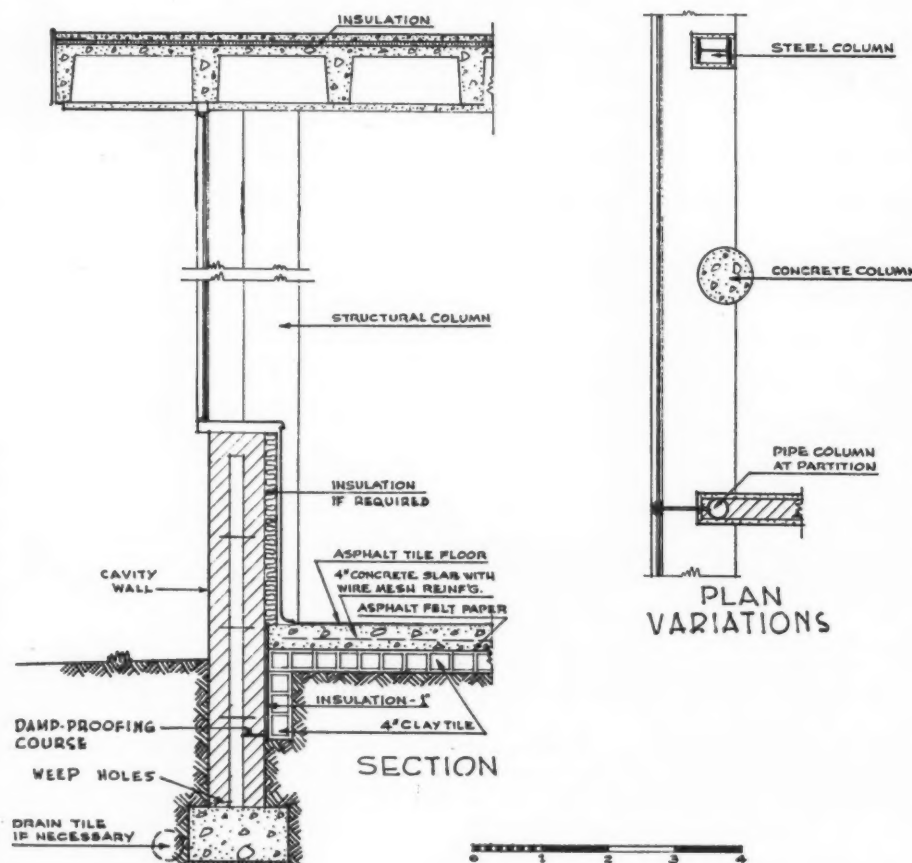
Three points should be considered:

- (1) Source of noise
- (2) Insulation of noise
- (3) Absorption of noise

(Continued on page 234)

⁵ Noise Reduction in Dwellings—Albert London, ARCHITECTURAL RECORD, Aug. 1949. Architectural Acoustics, Richard Bolt and Robert Newman, ARCHITECTURAL RECORD, (April, June and September 1950).

3. Typical exterior wall construction and column locations



You can easily keep peace in this family!

"I want a good-looking roof"

"I want a good, safe roof that won't keep needing repairs"



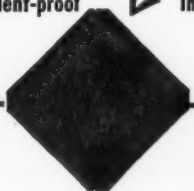
They're actually describing an Asbestone Asbestos-Cement Shingle roof and haven't named half of its advantages. The lady will find what she wants in choice of color, texture, and design. And an Asbestone roof assures her husband lifetime economy—a roof that will not wear out or burn.

ASBESTONE ROOFING SHINGLES give every advantage your clients want!

- ✓ Lifetime protection ✓ Lifetime beauty ✓ Fire-proof ✓ Weather-proof, weather-tight ✓ Freedom from rot and corrosion
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Dutch Lap:
Deep wood-grain texture—designed to emphasize popular straight line effect.



Hexagonal:
Smooth finish—the old reliable for an economical and functional roof design.



Early American Strip:
Deep wood-grain texture—the modern fireproof shingle of traditional design.

Colors: White, Green, Red, Gray, Black

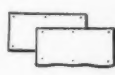
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Award-winning



Down in the deep South, one of the nation's finest examples of contemporary hospital planning and design rises against the Atlanta sky. This striking eight-story, 363-bed addition to the original Georgia Baptist Hospital (194 beds) has earned wide acclaim for its planning group. The American Institute of Architects has presented Awards of Merit to architects Stevens and Wilkinson for excellence of design and to the hospital's administrative executives for their help and cooperation.

The building houses new administrative, supply, and medical facilities, sufficient in area and equipment to serve the older hospital, as well as the new patient areas.

The foundation and frame are of reinforced concrete. Exterior walls are faced with brick. An unusual feature is an all-over grid on the east and west walls to protect windows from solar radiation. Concrete "eyebrows" above the windows (formed by extending the floor slabs) are combined with a cross-grid of aluminum louvers. Architects Stevens and Wilkinson estimate that this solar-louver grid saved its cost in air conditioning equipment.

The structure is completely air conditioned and boasts the most advanced types of hospital intercommunication systems.



It's Day-Brite in the waiting rooms

It's Day-Brite in the laboratory



Georgia Baptist Hospital



another architect-specified Day-Brite installation

In agreement with the growing emphasis on good lighting in hospital design, Stevens and Wilkinson were extremely quality-conscious when they planned Georgia Baptist's lighting system and selected fixtures.

They reasoned that about 80% of a person's actions are eye-controlled. In the complex operation of a hospital, the staff is faced with many critical seeing tasks that demand accurate, clear vision. Good hospital lighting means faster, better staff performance . . . reduces mistakes and errors . . . keeps morale up and turnover down . . . eliminates fatigue and nervous tension due to eyestrain.

The general lighting in the Georgia Baptist Hospital could easily serve as a model installation—in appearance, in adequate quantity and quality of illumination, in reasonableness of costs.

The entrance, lobby, Memorial Waiting Room and all corridors are lighted with Day-Brite troffers. All-white Day-Brite Viz-Aids* are installed in the pharmacy and all other waiting rooms. In the kitchen and supply rooms, Day-Brite all-white

Day-Line* industrial fixtures furnish a high level of illumination for comfortable, easy vision.

And beyond the assurance of year-in, year-out quality lighting performance, Stevens and Wilkinson's choice of Day-Brite guaranteed another must—*minimum maintenance and operating costs.*

But perhaps the most significant approval of Georgia Baptist's lighting installation is included in the words of the hospital's administrator, Mr. E. B. Peel . . . "We feel that this hospital is well planned from the standpoints of utility, economy, and appearance. We are greatly pleased with the results obtained."

A Day-Brite specification can help *you* give *your* clients more lighting per dollar invested. May we show you how?

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244

"DECIDEDLY BETTER"
DAY-BRITE
Lighting Fixtures

BUILDING THE ONE-STORY HOSPITAL

(Continued from page 230)

Sources. Certain noises can be minimized or eliminated at their sources. Motors, compressors and other equipment with moving parts should be mounted on an insulating base or otherwise isolated from the building structure. Plumbing fixtures and fittings should be properly selected, installed and maintained. Quiet operating hardware for doors and windows should be used. Rubber door silencers are recommended. Silent type electrical switches should be used in patient areas. Metal cabinet drawers should have their undersides treated with a heavy coat of cork-impregnated paint or have a suitable felt-base material cemented to the metal. Janitors closets should be large enough so janitor and mop truck can both get inside with door closed. Patient bedrooms should not be located adjacent to air conditioning equipment or other mechanical equipment rooms.

Insulation. Since it is impossible to eliminate all noises, it becomes necessary to confine them to their sources as much as possible. Many of our older buildings are quiet buildings because their walls, floors and doors are thick and heavy. However, insulation by weight and mass is not economical of space or materials according to present day standards. It becomes necessary to achieve a high

transmission loss with lightweight materials of thin sections. The consensus of authorities on acoustics is that an average transmission loss of 45 decibels is desirable to produce satisfactory results for walls between patient rooms. Partitions with a higher decibel rating should be used between patient rooms and noisy areas such as corridors, toilets, utility rooms or other work areas. Double partitions may be required for adequate sound insulation in certain instances between patient rooms and extremely noisy areas.

Consideration should be given to the selection of a floor construction which can effectively resist the transmission of impact sounds like those caused by walking or moving of furniture and equipment. Observations of existing types of construction indicate that a tapping loss of 20 decibels or more is necessary to eliminate undue disturbance from overhead noises.

Absorption. Acoustical finish materials absorb noises within the space. Treatment of entrance lobbies, public waiting rooms, administration offices, corridors, dining rooms, nurses stations, nurseries and labor rooms will tend to make the hospital a quieter building. Rooms such as kitchens, dishwashing rooms, utility rooms and floor pantries

should be furnished with a sanitary acoustical material which can readily be cleaned and which can be repainted without much loss in acoustical efficiency. Care should be taken in the selection and installation of acoustical finish materials to see that this material will not increase the fire hazard of the area involved.

7. FIRE SAFETY

The basic principles of fire safety include (1) minimizing the chance of a fire; (2) restricting the spread of fire if it does get started; (3) planning for a sufficient number of adequate exit facilities, and (4) installation of equipment for the prompt discovery, announcement of and extinguishing of fires.

One story buildings should be built of construction having a fire resistive rating of not less than one hour. The use of combustible finish materials should be severely limited. Wood trim and fabrics should be properly treated to retard the spread of flames.

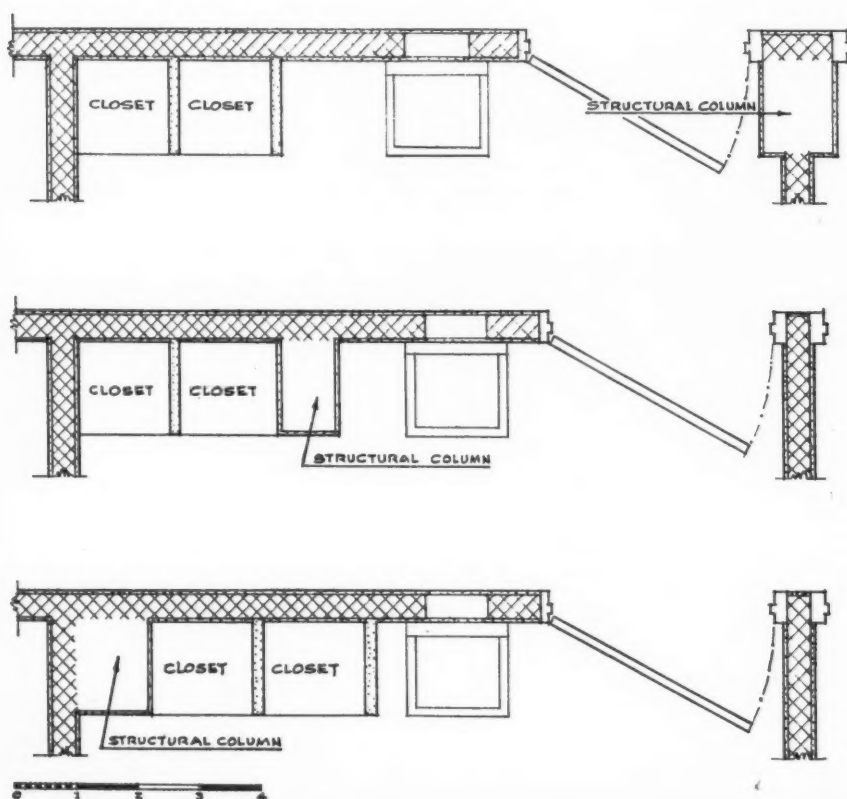
Floor construction over basement areas should be of non-combustible construction in order to isolate boiler room, storage and other basement hazards from patient areas. It may be advisable to provide an automatic sprinkler system throughout the basement area to protect the patient areas above.

Each patient wing should be capable of being closed off from the remaining hospital areas by automatic or self closing fire doors. Fire doors between boiler room and hospital should have a 2-hour rating to obtain a reasonable fire insurance rate, and should be self-closing with label on frame and door. All exterior doors which may be used as exits in case of fire should open out. Other exit doors, excluding individual room doors, should swing in the direction of exit travel. The accompanying plan indicates an exit opening at the end of each wing—a very good fire safety feature.

The hospital fire alarm system may be one of several types selected with due consideration for the size and character of the institution, training of personnel, construction and layout of buildings, and location with respect to public fire fighting facilities. It is best that local fire authorities be consulted in the selection of proper alarm equipment.

A municipal fire alarm box should be located conveniently adjacent to the main entrance of every hospital if the internal alarm system does not make provision for such action.

4. Various suggested locations for interior columns

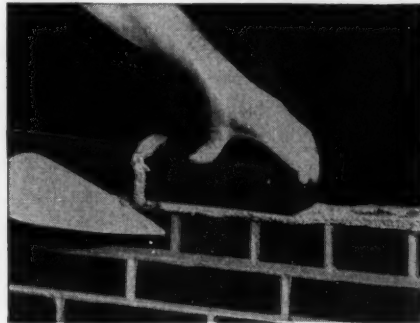


GET BETTER BRICKWORK WITH BRIXMENT!

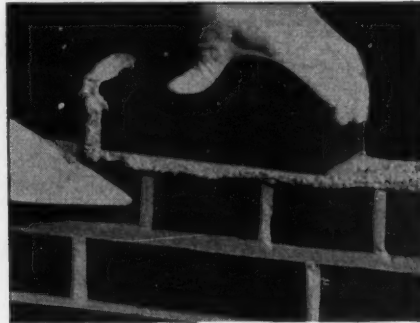
Good workmanship requires that all head joints in both face brick and back-up work be *completely* filled with mortar, by any of the three methods pictured below.



Method 1. Plenty of mortar should be thrown on the end of the brick to be placed.



The brick should then be pushed into place.



So that the mortar oozes out at the top of the head joint.



Method 2. A dab of mortar should be spotted on the corner of the brick already in place.



Then plenty of mortar should be thrown on the end of the brick already in place.



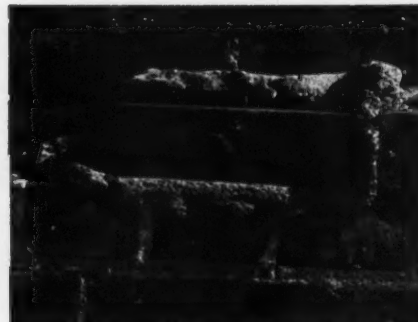
So there will be more than enough mortar to fill the joint completely when the next brick is pushed into place.



Method 3. A full trowel of mortar should be thrown on the wall.



Then the brick should be shoved into this deep bed of mortar.



So that the mortar oozes out at the top of the joint.

BRIXMENT permits the bricklayer to do the kind of work pictured above. It does not stiffen up too fast, when it hits the brick. It remains rich and plastic long enough to allow the bricklayer to place the brick, easily and accurately.

In addition to its greater plasticity, Brixment mortar has higher water-retaining capacity and bonding quality, and greater resistance to freezing and thawing. Because of this *combination* of advantages, Brixment is the leading masonry cement on the market.

LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE 2, KENTUCKY

Mary

deserves the be



This interior of one of the classrooms at Lynnewood Elementary School, Elkins Park, Pennsylvania, graphically illustrates the "design for learning" of today's modern schoolrooms. The proper

attention to lighting, acoustics, and heating and ventilating give an ideal physical plant in which to carry on the learning process.

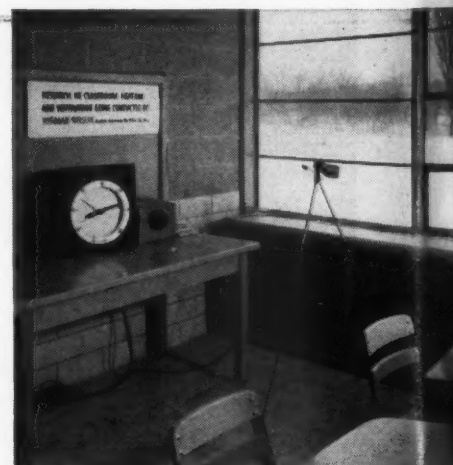
THESE TESTS SHOW WHY THE LARGE WINDOW EXPANSES IN MODERN SCHOOLS DO NOT PRESENT A RADIANT COOLING PROBLEM DURING DAYTIME CLASSROOM USE. THIS CONCLUSION IS ONE OF MANY DETERMINED THROUGH COMPREHENSIVE TESTING OF ENVIRONMENTAL FACTORS IN ACTUAL SCHOOL LABORATORIES BY HERMAN NELSON.



A directional thermopile, calibrated to read actual surface temperatures, is shown mounted on a tripod and pointed at a western sky through classroom windows during a medium overcast winter morning. With the outside glass surface covered as shown, the indicator-recorder reads the actual inside glass surface temperature of about 51° F.



With the glass uncovered, the actual glass temperature remains the same, however, SKY SHINE, streaming in through the windows, causes the thermopile to read over 80° F. In relation to room comfort, the uncovered windows are equivalent to a wall that is radiantly heated to 80° F.



The thermopile when pointed at the snow covered ground outside reads even higher because both diffused and reflected SKY SHINE is received through the windows.

In its s
Mary and
better wa
important th
Industrial
These
in Americ
Their
knew. Th
room - w
children o

is exterio
nnsylvania
the mod

the best we can give her...

In its schoolrooms the American future is being decided. Mary and her millions of classmates hold our hopes for a better way of life than we have known. They are more important than our Armed Forces, our Government, our vast industrial plants—more important than all of them combined.

These children of ours deserve the best we can give them and in America we are fortunately able to give them a great deal.

Their schools are far superior to any our generation ever knew. The modern schoolroom is a pleasant, comfortable room—well lighted and ventilated. As a result, the school children of today are brighter, healthier, more alert.

Herman Nelson is proud to have played a leading part in schoolroom improvement. Herman Nelson DRAFTISTOP equipment makes ideal climate by providing automatic heating, ventilation and cooling, thus creating the proper climate for health and learning. It has earned the name DRAFTISTOP by scientifically overcoming the drafts created by the big windows of modern schools. When you are planning a new schoolhouse that is to provide the best for the children of your community you will want to give careful consideration to Herman Nelson DRAFTISTOP. For further information, write Dept. AR-6, Herman Nelson Division, American Air Filter Company, Inc., Moline, Illinois.



This exterior view of Lynnewood Elementary School, Elkins Park, Pennsylvania, shows the adaptation of colonial-style architecture to the modern school plant. This most modern building is com-

pletely equipped with DRAFTISTOP to insure the finest in heating, ventilating and cooling. Superintendent of Schools, Dr. Frank C. Ketler; Architects, Heacock and Platt; Consulting Engineers, Pennell and Wiltberger.

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SYSTEM OF CLASSROOM
VENTILATION



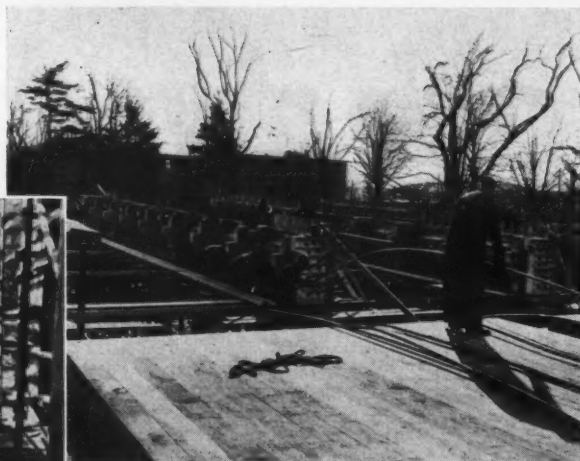
PRESTRESSED CONCRETE

(Continued from page 207)

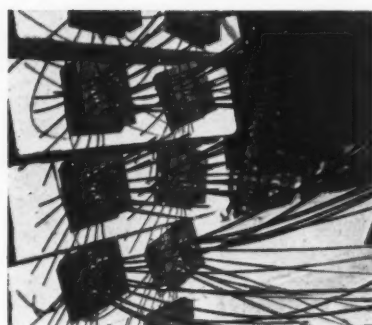
1



2



3



4



5



6



1. an early step in fabricating the prestressed girders consisted of slipping a steel tube sheath over the twelve-wire cables to prevent bonding with the poured-in-place concrete

2. sheathed cables are threaded through precast end blocks and then precast key-stone blocks which keep the cables in proper curvature and carry beams supporting the floor

3. wedge-type fittings grab the 12 wires in each cable and exert a compressive force on the girders

4. a cable is being prestressed by a jack (center)

5. wires projecting through the floor prior to second stage of prestressing

6. underside of assembly room floor showing how key-stone brackets hold beams

these was a dining and assembly hall building for Manhattanville College, Harrison, N. Y. It was not possible for the architects to get an allocation of 72 tons of structural steel for six girders over the dining hall in time to meet the construction schedule. And if reinforced concrete had been used it would have meant completely redesigning the building to make it taller — the girders would have been so deep there would not have been sufficient ceiling height.

The architects, Eggers & Higgins in consultation with the engineers, Weiskopf and Pickworth, and the contractors, George A. Fuller Co. decided on prestressed girders to support the floor of

the assembly hall which is directly above the dining hall.

The six girders are each 65 ft long and 4 ft deep (steel girders including fireproofing would have been 3 ft 6 in. deep). The girders were designed by the Preload Corp. to carry a live load of 100 lb per sq ft, a dead load of 122 lb per sq ft, and their own weight. Each girder is prestressed by 22 cables. The prestressing operation was in two parts. The girders were poured in place, and, after hardening, 10 cables were stretched and anchored to carry the dead load and a portion of the floor load. The additional 12 cables were then prestressed to carry the remainder of the

floor load and live load.

Parts of the girders and anchorages were precast — first to get the high strength required, and second to avoid erecting complicated forms at the site (see Figs. 2, 4).

The prestressing cables were threaded through precast keystone shaped blocks evenly spaced between the two end blocks of precast concrete. The prestressed cables transfer their stress through wedge fittings to precast anchorage blocks, and thus to the girder. The keystone blocks serve to depress the cables for proper curvature and also to carry concrete beams on their flanges for the floor.

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AB BREAKERS*

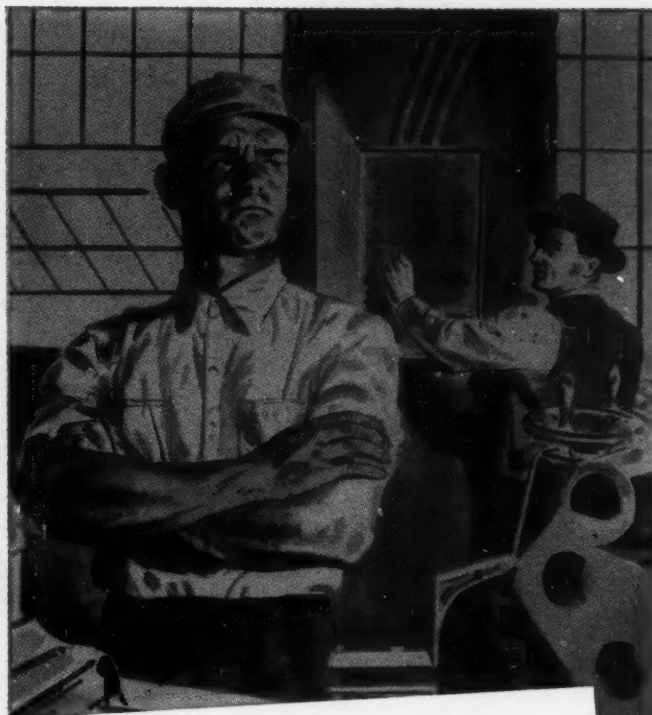
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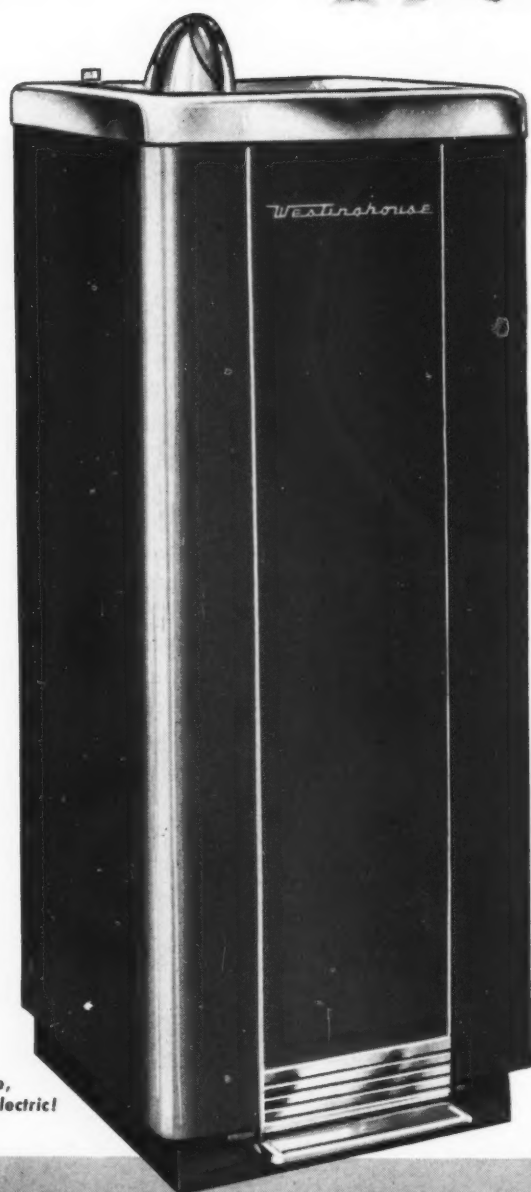


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of course,
it's electric!

The superb appointments of the Philadelphia International Airport are a symbol of free enterprise . . . and when passengers from all over the globe pause for a refreshing drink at the Westinghouse Water Coolers, they are again reminded that nothing is lacking for their comfort.

These Westinghouse Water Coolers (Model WA13A) efficiently meet all the engineering specifications for easy servicing and economical operation. They occupy only 14" x 14" of floor space. The baked-on blue-grey enamel finish and stainless steel trim complement the streamline design so effective for an airport motif.

WA13A . . . 12½-gallon capacity. Stainless steel top. Foot-pedal control. Automatic stream-height regulator. Anti-squirt bubbler. 11 other models are available with capacities from 1 gallon to 22½ gallons.

WB3
3-Gallon,
Bottle Cooler



WA4A
4-Gallon,
Air Cooled



WA7A
7-Gallon,
Air Cooled



WW14A
14-Gallon,
Water Cooled



WW 22
22½-Gallon
Water Cooled

Airways are symbolic of America's tempo of traveling fast, far and often. And where you find new constructions meeting these needs, you'll find Westinghouse Water Coolers. They're known as the *Blue Chip Line of the Industry*... an endorsement established by the outstanding percentage of industry sales obtained in 1951 and, this year, continuing at an accelerated pace.

specifications cover a full line in every capacity for every need: Bottle, Pressure, Compartment and Remote Types from 1 gallon to 22½ gallons. Every model includes our 5-Year Guarantee Plan. This covers the entire Hermetically-Sealed Refrigeration System: motor compressor, evaporator and condenser... not just the motor compressor alone.

call for Westinghouse Water Coolers as soon as you contemplate bidding on any new project. You'll find they're exactly what you need for any type of industrial plant, military installation, institution, store or building, large or small.

for your immediate needs, Westinghouse has a complete Architect's Kit; a data file which includes large-sized, readable and accurate engineer's drawings. This file is yours for the asking. Drop a card to the Advertising Department, Westinghouse Electric Corporation, 653 Page Boulevard, Springfield 2, Massachusetts.

Westinghouse is yours all the way with assuring assistance that the Water Cooler requirements are adequate, efficient and a credit to any construction project now on your drawing board or contemplated for the future. With this assurance, you'll find it profitable to specify Westinghouse because...

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22½-Gallon,
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Top, Water Cooled

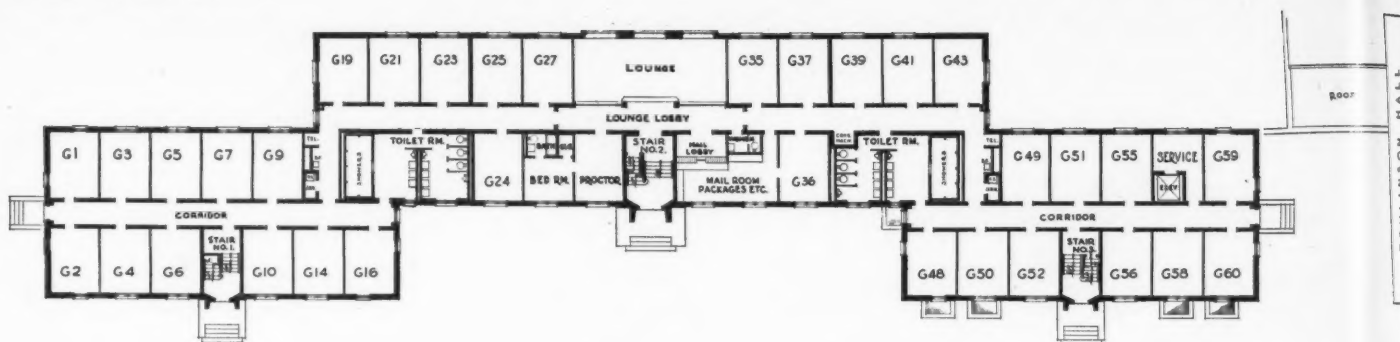


WBC1
Compartment
Bottle Cooler



TRIAL-TESTED DORM

(Continued from page 207)



First floor plan of the Case dormitory is above, showing lounge and office facilities. Right wing is in foreground of photo



Walls of mock-up room were easily moved to try out different room sizes



Student Suggestion	Estimated Saving in Cost
Omit plaster on interior walls.....	\$11,000
Reduce length of mock-up room 6-in. without loss of liveability.....	10,000
Use prefabricated wardrobes instead of built-in units.....	15,000
Eliminate combination bed lamp and book shelf over beds (considered conducive to smoking and reading in bed)	9,000
Use 5 ft corridor, not 6 ft.....	10,000
Use incandescent instead of fluorescent lamps.....	2,200
Use draw-type opaque drapes in place of venetian blinds.....	650
Total Saving.....	\$57,850

The floor area occupies a total of 50,800 sq ft with 11,000 sq ft per floor except for the 6880 sq ft in the basement. Facilities include a reception room, mail room and office and large utility and maintenance areas.

Student Ideas Save Ten Per Cent

Suggestions from students who inspected and lived in the mock-up room are listed in the table left. The suggestion to use incandescent study lamps instead of fluorescent stemmed from the fact that fluorescent lamps produced radio interference when the set was on the desk. As a result, a specially designed desk study lamp was designed by E. W. Commery with these features: a high level of illumination on the work area, elimination of reflected glare, elimination of high brightness contrasts in the field

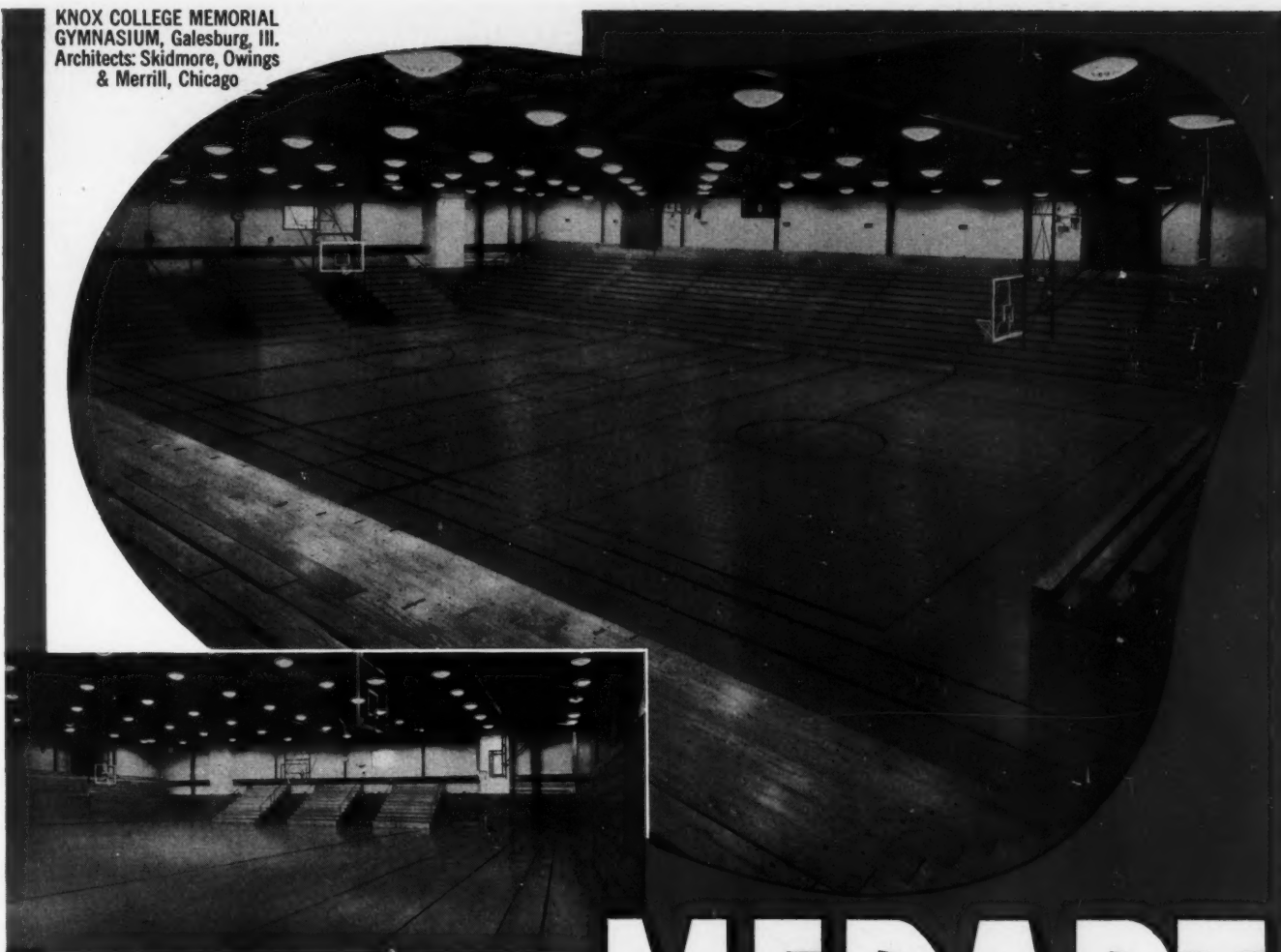
of vision. It throws diffused light down and light to the ceiling. The lamps are permanently center-mounted through the back of the desks, can be adjusted vertically and swung horizontally to suit the user.

The general lighting was designed by Professor R. C. Putnam of the Case electrical engineering department and stresses comfortable seeing and easy maintenance. For example, toilet rooms are lighted by low brightness fluorescent lamps mounted directly above the mirrors with no shielding required.

Structure

Outside walls and inside hallway walls of brick support the reinforced concrete slabs. Partitions are lightweight concrete block. Only plastering is on the inside face of exterior walls.

KNOX COLLEGE MEMORIAL
GYMNASIUM, Galesburg, Ill.
Architects: Skidmore, Owings
& Merrill, Chicago



**5,948 Extra Square
Feet Of Usable
Floor Space With**

*MEDART

TELESCOPIC* GYM SEATS

Take a close look at the pictures above. At the top, all the Medart Seats are in open position ready to comfortably and safely accommodate a packed-to-the-rafters audience of 3,200! The inset shows side seats closed, and seats at one end still open.

These two pictures explain why this gym, with seating capacity for 3,200 persons, requires a building virtually no larger than one without seats for spectators! Imagine what the size of this building would be, and the startling extra cost, if 3200 expensive fixed seats had been installed!

Here is an example proving how Medart Telescopic Gym Seats actually regain the use of 5,948 square feet of extra floor space for daily class activity—evidence of the tremendous savings in building costs made possible by better utilization of space.

Convenience and Ease-of-handling are important factors too. Because of Medart's exclusive "Floating Motion" design, it takes little effort and only a few moments to completely open or close Medart Seats. If all the seats are not needed, only one row, or as many rows as required, can be provided and remaining rows left closed.

Safety is assured, even under loads of 400 Lbs. per lineal foot. Medart's steel understructure is a complete free-standing assembly. Solid, one-piece wood seats, risers and footboards add extra strength and are not used to tie together the steel understructure members. Each row of seats is supported from the floor by four vertical steel members.

Many Other Exclusive Features make Medart Telescopic Gym Seats a "best buy". If you have a seating problem, write Medart.

*Medart Telescopic Gym Seats are fully protected by U. S. Patents

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Gym Seats

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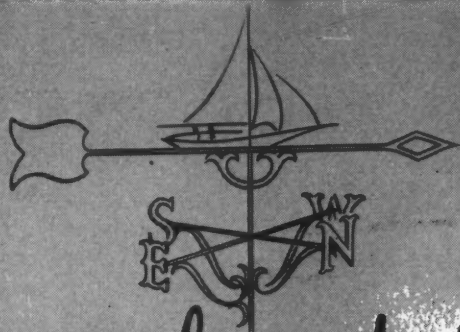
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Architects: Skidmore, Merrill & Owens, Chicago
Builders' Hardware: W. H. Grimm Hardware Co., Chicago

2.
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Architects: Waid & Corbett, New York
Corbett and Angilly, New York
Arthur O. Angilly, New York
Builders' Hardware: P. & F. Corbin, New York

3.
Statler Hotel, Los Angeles
Architects: Holabird & Root & Burgee, Chicago
Associate Architect: Wm. B. Tabler, New York
Builders' Hardware: Builders' Hardware Supply Co., Los Angeles

4.
Sakowitz Bros., Houston
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3.



4.

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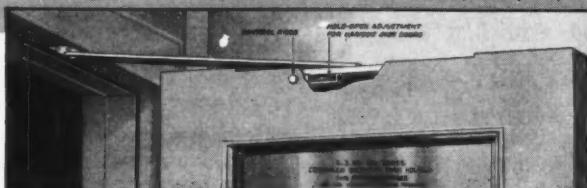
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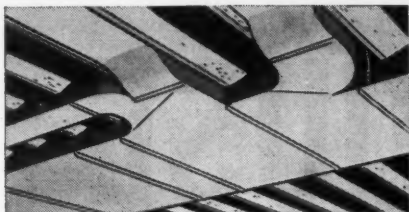
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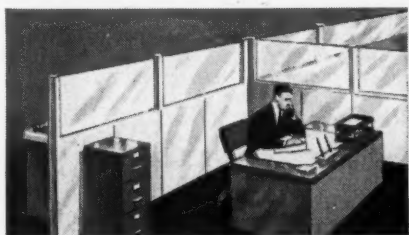
Architectural Service

Better Ductwork



Progressive heating and ventilating engineers recognize the many advantages of aluminum ducts. Lightweight aluminum reduces structural loads and will not rust from condensation in cooling systems. Both are important factors in modernizing existing buildings. Non-sparking aluminum is better suited to the removal of inflammable and explosive dust and fumes. And with *all* these advantages, aluminum installation usually costs less, particularly for handling larger sections.

Partitions



No other material has the design flexibility of aluminum for office partitioning. Rectangular aluminum tube framing minimizes floor load—also serves as wiring conduit. Reynolds embossed or plain aluminum paneling can be perforated for acoustical benefits, and painted to harmonize with color scheme. A natural aluminum finish is recommended for extruded trim elements.

Drop-Panel Ceilings



This new type ceiling is the lightweight companion to curtain walls . . . the answer to low cost modernization. Suspension is from roof structurals or floor above. Aluminum panels (or with other panel materials for variety) are simply laid in place. They are easily lifted for access to concealed utilities and ductwork. Perforations provide uniform air distribution and pass sound to be absorbed by insulating material above. Write to Reynolds for details on these and any other architectural aluminum applications.

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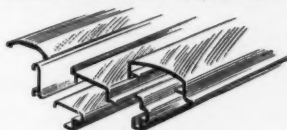
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When planning your next design, stop and ask yourself what other metal offers the advantages that you find in aluminum. Unlimited design flexibility . . . widest range of finishes . . . light weight . . . great strength . . . rust and corrosion resistance . . . low cost. All these factors mean aluminum is the ideal material for *your* specifications.

Even though the supply of aluminum is limited now, the assistance of Reynolds Architectural Service is still yours for the asking. This service is an efficient and economical solution to your design problems. For complete information, call the Reynolds office listed under "Aluminum" in your classified directory or write direct.



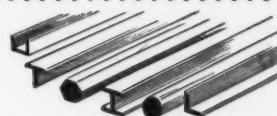
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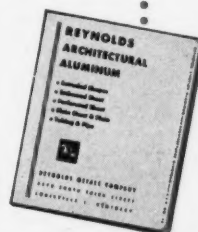
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LEVER HOUSE

tell how they use Sweet's File to



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of Skidmore,
Owings & Merrill,
Architects, N. Y.



William S. Brown,
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"No other source gives us as much useful data"
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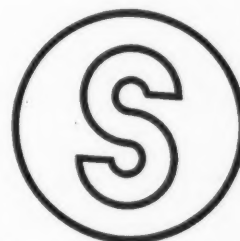
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View from lobby of Lever House

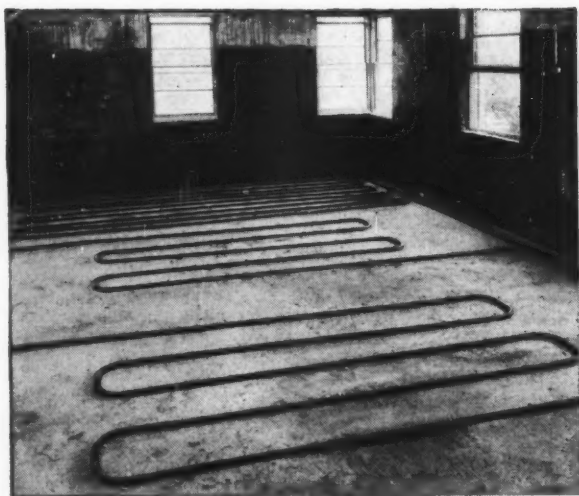
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New York**

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now more comfortable...**



**with radiant heating
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● You'll look a long time before you find a building more ideally suited to the needs of the convalescent. It's the Brooklyn Jewish Home for Convalescents in Far Rockaway, N. Y.

They used 27 tons of National Steel Pipe for the radiant heating and snow melting installation. Every room has radiant heat—the ideal heating system for the aged and the ill.

To make full use of the terrace year round, a snow melting system was installed using National Steel Pipe. Now, patients can utilize the sun-bathed terrace in all but the very worst weather.

National Steel Pipe has been used for many radiant heating systems in homes, institutions and industrial plants. The pipe is made to the same rigid standards that have made National the preferred pipe for conventional heating for over 60 years.

If you have any questions regarding pipe for radiant heating or snow melting, make use of our wide experience. We think we'll be able to help you.

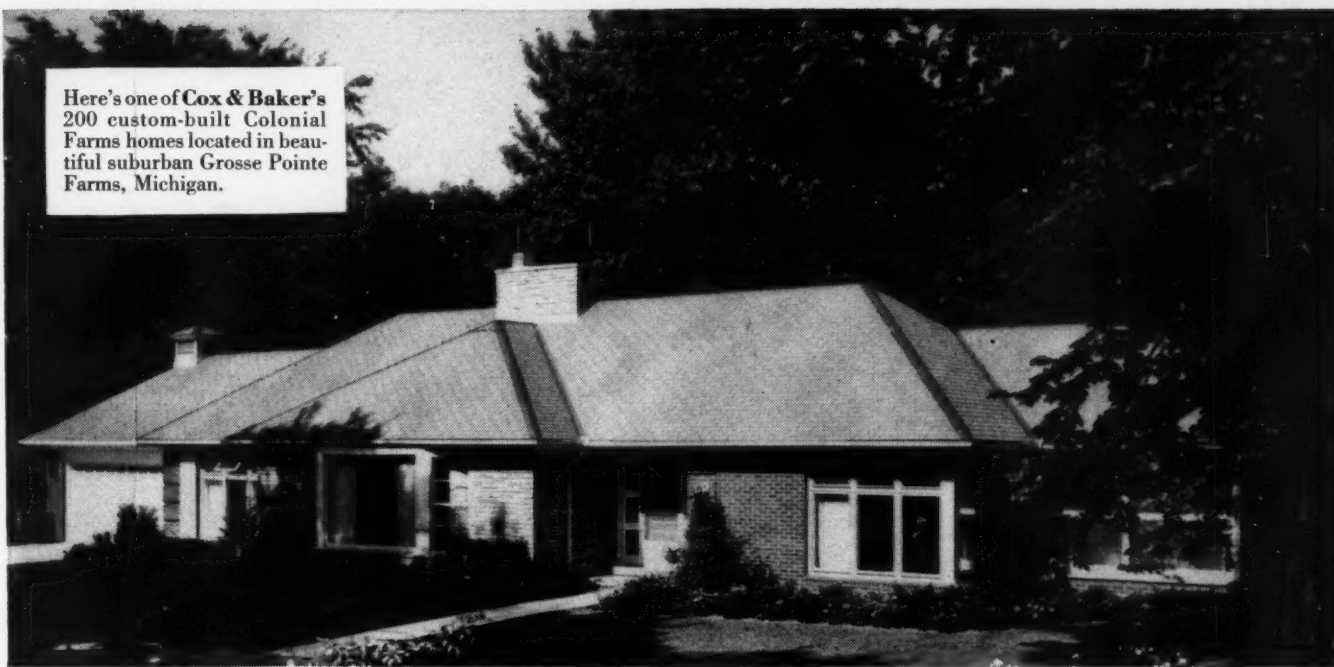
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UNITED STATES STEEL

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100% GOLD BOND GYPSUM LATH. Bill Baker (left) of Cox & Baker and Robert Dickson (center) Robert Dickson Lathing Co., watch as Gold Bond Gypsum Lath and Stripite are applied in a Cox & Baker Colonial Farms home.



100% GOLD BOND PLASTER AND LIME. Frank L. DeGrendel (second from left), DeGrendel Fuel and Supply Co. and National Gypsum Company representatives look on as Kaye and John Bruggeman (right), Bruggeman Bros. plaster one of Cox & Baker's Colonial Farms houses with Gold Bond Plaster.

100% Gold Bond Rock Wool Insulation on this project.



General contractor: Roediger Construction, Inc., Cleveland, Ohio.

In the new Shaker Towers,

THE owners of Shaker Towers Apartments in Cleveland, Ohio set out to build the most de luxe and luxurious apartment building between New York and Chicago.

Naturally, they kept in mind the comfort of tenants . . . *especially wives.*

The automatic and efficient kitchens are designed to eliminate many of the day-to-day work details of maintaining a home.

The refrigerator has a large separate zero-degree storage compartment which eliminates many shopping trips. Dishwashing is automatic. And the double-oven range provides extra capacity and clean, cool, rapid cooking.

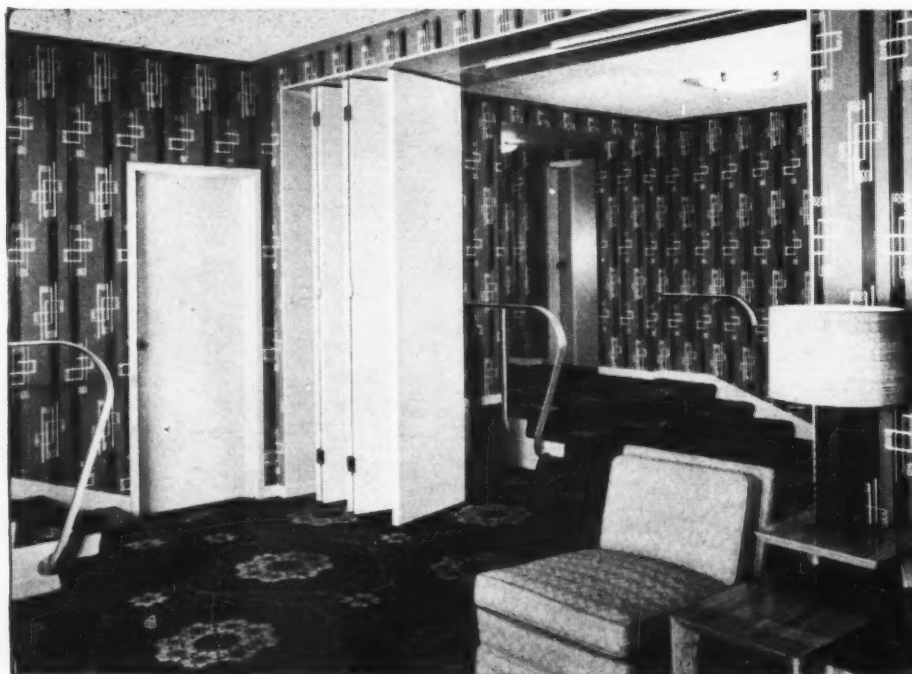
In the basement, a large, light and airy laundry contains complete facilities for washing, automatic drying and automatic ironing of clothes.

Home Bureau, General Electric Company, Louisville 2, Kentucky.



Says Joseph Ceruti, architect of the structure:

"After a thorough analysis of electrical kitchen appliances, the owners and I finally selected dependable General Electric because of the many distinctive features . . . in addition, the design, quality and appearance of the General Electric appliances are in accord with other requirements for a fine building which tenants can enjoy thoroughly."



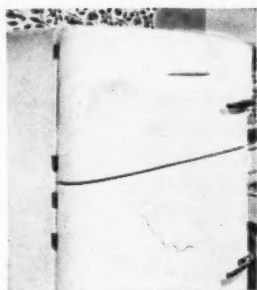
Ideas for your next structure? Shaker Towers Apartments has two large lobbies. One wall of each is entirely of glass, and faces well-landscaped lawn.

Folding doors can partition off half of each of these lobbies to serve as entertainment suites when tenants wish to have a large party for such events as weddings or christenings. Each of these suites is equipped with G-E Kitchens in which caterers can prepare meals.

tenants are enthusiastic



Says tenant Mrs. Ann O'Connell: "I'm frank to say that the General Electric kitchen was a *mighty* big factor in our deciding to make our residence at Shaker Towers. The G-E Dishwasher, for instance, is *such* a convenience and timesaver.



"My G-E Refrigerator saves me so much time. The separate zero-cold compartment keeps a supply of frozen foods on hand for weeks ahead, so there's much less shopping to do. And, best of all, there's no defrosting for me to do in the fresh-food section."



"Cooking on my General Electric Range is much easier due to the speed of cooking with electricity, the advantages of the pushbutton heat control and, of course, the extra space provided by the double oven.

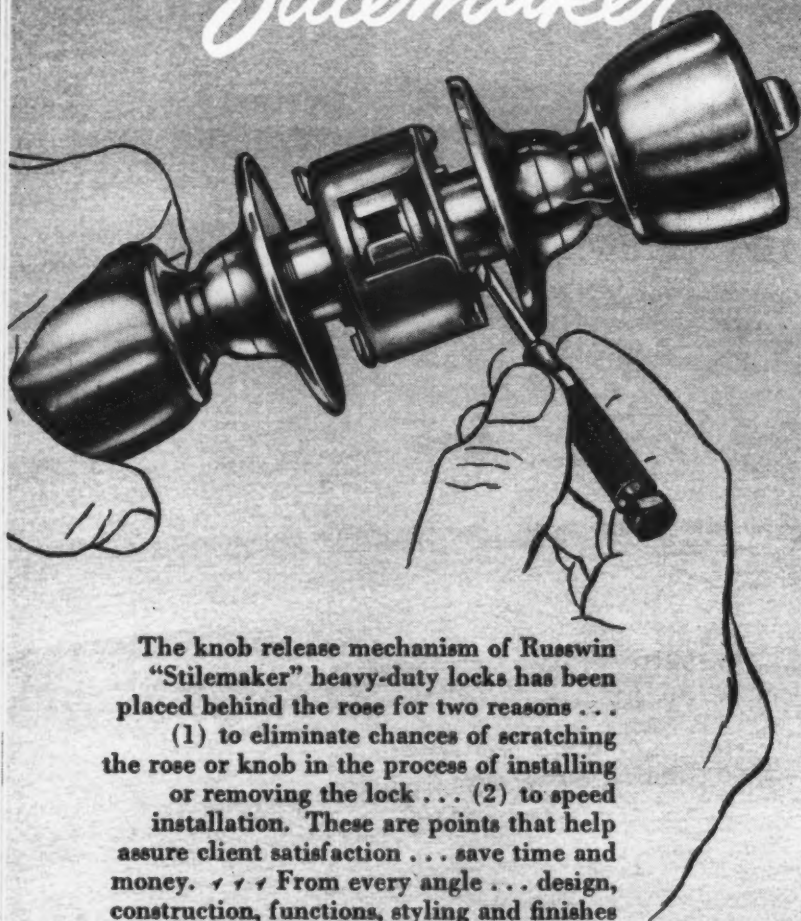


Here's Mrs. O'Connell at an automatic General Electric Flat-plate Ironer. At extreme right: G-E Clothes Dryers that eliminate clotheslines and backaches for tenants. G-E Washers also were installed.

You can put your confidence in—

GENERAL  **ELECTRIC**

A good point to remember about the Russwin *"Stilemaker"*

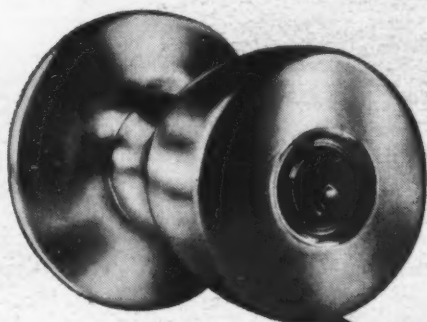


The knob release mechanism of Russwin "Stilemaker" heavy-duty locks has been placed behind the rose for two reasons . . .

(1) to eliminate chances of scratching the rose or knob in the process of installing or removing the lock . . . (2) to speed installation. These are points that help assure client satisfaction . . . save time and money. ✓ ✓ ✓ From every angle . . . design, construction, functions, styling and finishes . . . every effort has been made to merit your complete confidence in specifying Russwin "Stilemaker" heavy duty locks.

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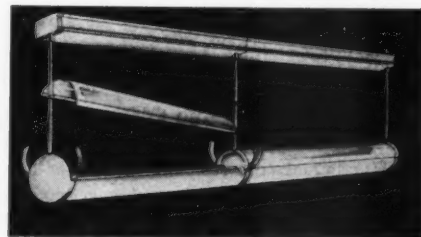
PRODUCTS (Continued from page 217)

cooling, heating, humidification, dehumidification and fresh, filtered air. Although the Dallas project uses gas-fired furnaces, oil-fired furnaces are reported to be equally adaptable for use with the 2 or 3 hp model packaged conditioners. Heating and cooling are controlled by separate thermostats located in the living room.

According to those connected with it, the Dallas project has demonstrated effectively that air-conditioning for small homes is economically practical besides being desirable from the standpoint of personal comfort. General Electric Corp., Air Conditioning Div., Bloomfield, N. J.

Enclosed Luminous Indirect Luminaires

Developed by a group of engineers from Massachusetts Institute of Technology, the *Day-Brite P-B-M* is a new



Cylindrical fixture is white at bottom, clear at top. Sections hinge at middle

kind of fixture for use in school classrooms, drafting rooms and offices. The fixture consists of a 2-piece Plexiglas cylinder, clear on top, white on the bottom and hinged in the middle. The cylinder accommodates two 40 w fluorescent or 40 and 60 w slimline lamps and is connected by "A-J" adjustable hanger stems to a wireway which is fastened to the ceiling and which supports the ballasts. The wireway has a snap-on cover which permits easy access to the ballasts for servicing without disturbing the rest of the fixture. Relamping is simplified with the hinged covers, which

Architectural Engineering

PRODUCTS (Continued from page 252)

also serve to keep insects and dirt deposits out of the fixture. The units may be used singly or in runs, and the hangers are said to permit alignment after installation. All exposed metal has a hot-bonded white enamel finish. Day-Brite Lighting, Inc., 5411 Bulwer Ave., St. Louis 7, Mo.

Shatter-proof Paneling Material

Available in corrugated and flat sheets up to 12 ft in length, a new Fiberglass reinforced plastic material called *Plexolite* has recently been introduced. Manufactured in three thicknesses, $\frac{1}{8}$, $\frac{1}{4}$, and $\frac{3}{8}$ -in., the corresponding weights are 8, 12 and 24 oz per sq ft. Included in the twelve colors are coral, yellow, green, blue and ivory. Among the many uses possible for this new material are partitions, shower doors, awnings, sky lights and garage doors. It is reported to have excellent structural strength, be unaffected by moisture, alkaline fumes or mild acids, and to be worked with ordinary tools. Plexolite Corp., 4223-25 W. Jefferson Blvd., Los Angeles, Calif.

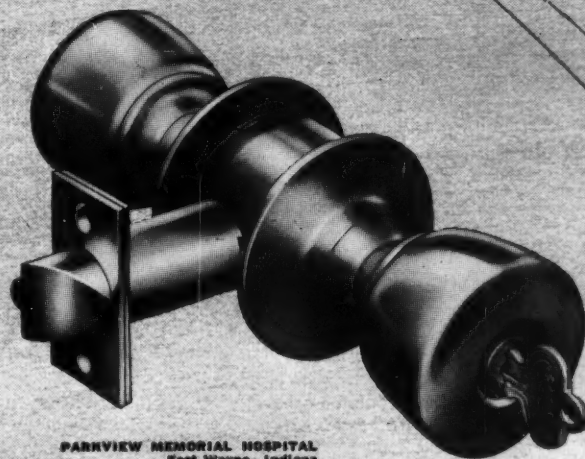
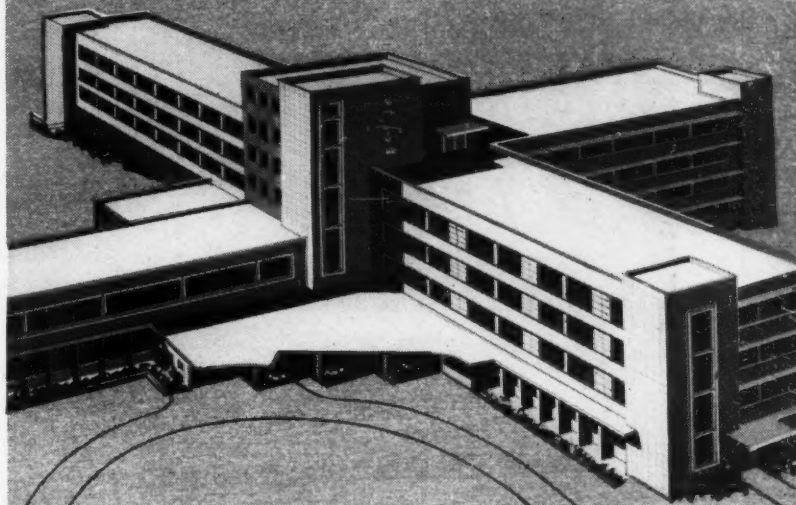


Translucent Fiberglass reinforced plastic is used effectively as paneling

$\frac{1}{8}$ and $\frac{1}{4}$ -in., the corresponding weights are 8, 12 and 24 oz per sq ft. Included in the twelve colors are coral, yellow, green, blue and ivory. Among the many uses possible for this new material are partitions, shower doors, awnings, sky lights and garage doors. It is reported to have excellent structural strength, be unaffected by moisture, alkaline fumes or mild acids, and to be worked with ordinary tools. Plexolite Corp., 4223-25 W. Jefferson Blvd., Los Angeles, Calif.

(Continued on page 257)

The New "Look" in Fort Wayne...



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CONTRACTORS . . . Hagerman
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in builders'
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This Double Talk Makes Sense!



Edwards New "Soft Speaking" Nurses' Call Station Doubles Room Capacity in Smaller Unit

Two great names in sound and signaling . . . Stromberg-Carlson and Edwards combined to make this new Master Station more compact, convenient and efficient than ever.

Now, *two* rooms can be served by a *single* key. Yet each room retains Edwards privacy feature — only the patient can initiate the call. Room range is doubled yet the

dimensions of the Master Station are substantially smaller. A new press-to-talk button in the handset frees one hand of the nurse to take notes. The super-sensitive Stromberg-Carlson amplifier built into the station, can be removed easily for service. Maximum patient protection is assured by a supervisory lamp that lights even if a station lamp burns out. An emergency lamp records calls from nursery, toilet or any other designated location.

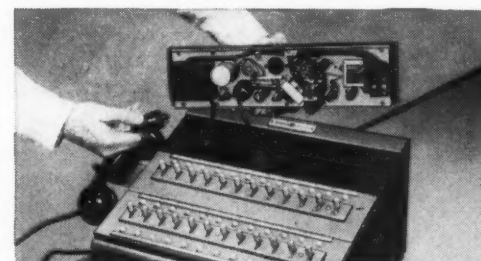
These are a few of many features that make this new Edwards Master Station the most efficient ever engineered. Write for free bulletin today. Edwards Company, Inc., Dept. A-6, Norwalk, Conn.

Precision Built for Long Life and High Efficiency

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| 1. Rugged, dynamic Telephone Transmitter | 6. Choice of 12, 24, 36 or 48 Stations |
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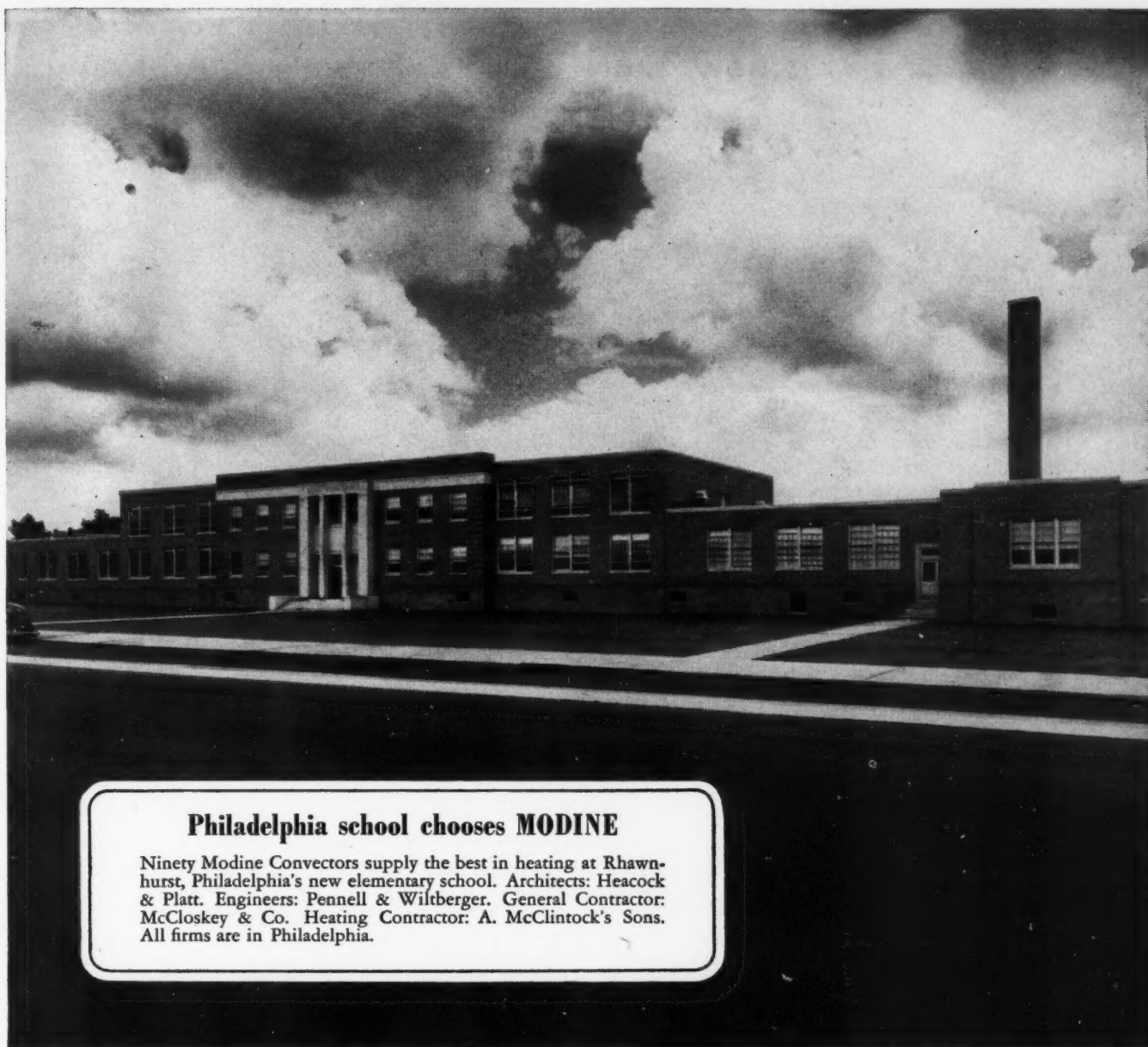
No More "3 Handed Nurses" . . . Convenient press-to-talk button in handset opens communication with patient, leaves nurse's hand free to make necessary notes.



"Inside Story" . . . Plug in connections allow built-in amplifier to be removed easily for service. Tubes replaced by simply removing screen ventilating grill at rear of cabinet.

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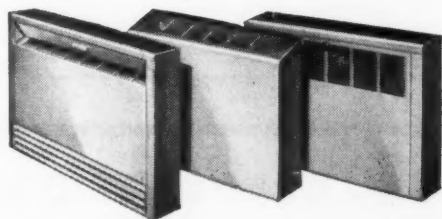
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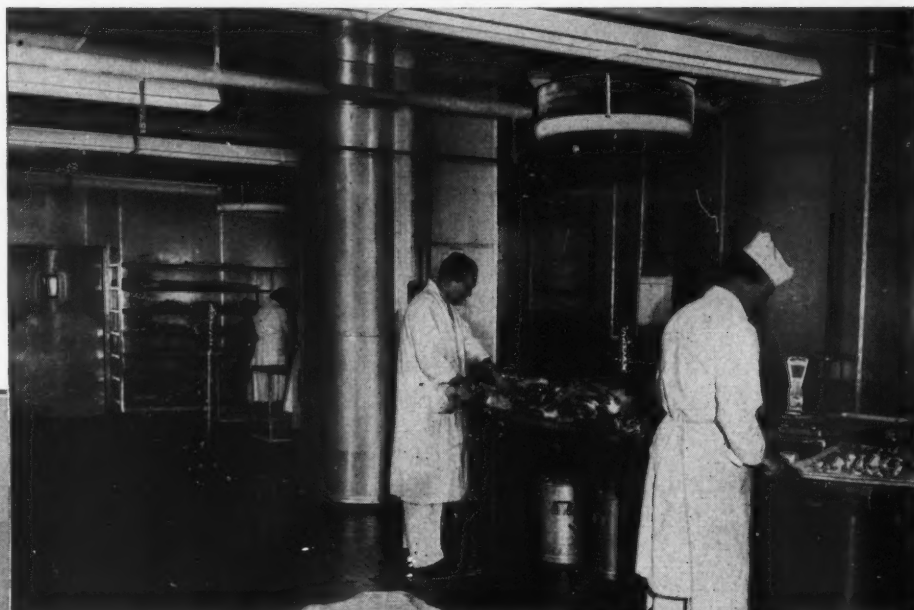
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tects: Brown & Gunther,
Con. Engineer: Douglas
L. McIntyre*



ALUMISEAL WITH ALUMISATIN FINISH

U.S. Pat. App. For Reg. U.S. Trade Mark

To the unsurpassed insulating features of heavy gauge ALUMISEAL may now be added the satin-like quality of ALUMISATIN finish, providing an unequalled treatment for walls and ceilings where the highest degree of beauty, cleanliness and durability are desired with positive control of humidity, moisture-vapor and temperature.

ALUMISATIN finish is achieved by applying to heavy gauge Alumiseal sheets a heavy adherent coating of aluminum oxide integral with the surface of the metal.

ALUMISATIN finish is intrinsically hard, and its smooth, impervious surface offers substantial resistance to wear and the collecting of dirt. It can be readily cleaned with mild soap and water.

ALUMISATIN finish offers the added advantage of economy in maintenance, for the permanence of its beauty eliminates the need of periodic painting or refinishing. For further information, write:

We recommend applications in
rooms, corridors, etc., in such
projects as:

Hospitals	Restaurants
Schools	Dairies
Research & Experimental Laboratories	Meat Storages
Bakeries	Super Markets
Commissaries	Grocery Warehouses

*It is recommended that the installation of
Alumiseal with ALUMISATIN finish be
handled by our own applicators, or by one
of our accredited distributors.*

ALUMISEAL CORPORATION



383 MADISON AVENUE
NEW YORK 17, NEW YORK

**POSITIVE control of
heat, moisture-vapor
and humidity with**

ALUMISEAL INSULATION

Lead-faced vapor-proof tape, or Alumiseal composition tape, at joints positively seals against moisture

Alumiseal is unique double duty insulation. A combination of solid aluminum alloy sheets that reflect and defy heat with joints sealed tight as a drum by lead-faced vapor-proof tape, or Alumiseal composition tape, that defies moisture. Nothing else equals Alumiseal. Its clean, sanitary finish is rust proof, rot proof, vermin proof, fire safe. No deterioration, no costly replacement, no maintenance, no painting.

Alumiseal is ideal for freezers, coolers, bakery proof rooms, fermentation rooms, hardening rooms, banana ripening rooms, bulk storages—used extensively in all-weather test rooms and altitude chambers where temperatures range from minus 100°F. to plus 200°F.—any refrigerated or controlled humidity structures.

C. T. HOGAN & CO., INC. specializes in the engineering and installation of **ALUMISEAL** and **ALUMISEAL** with **ALUMISATIN** finish.

TYPICAL ORGANIZATIONS USING ALUMISEAL

A & P Bakery Division	Hot Shoppes, Inc.
Bakeries, Inc. (Sub. of Stop & Shop)	Kraft Foods Company
Best Foods, Inc.	Kroger Company
Bickford's, Inc.	Land O'Lakes Creameries, Inc.
Breakstone Bros., Inc.	Muller Dairies, Inc.
Cushman's Sons, Inc.	National Biscuit Company
Detroit Creamery Company	National Dairy Products Corp.
First National Stores	National Tea Company
Food Fair Stores, Inc.	Reick-McJunkin Dairy Company
General Electric Company	Sheffield Farms Company, Inc.
General Foods Corporation	Southern Dairies, Inc.
Chas. D. Glennie, Inc.	Standard Brands, Inc.
General Motors Research Lab.	Tom Boy Stores, Inc.
Haines Ce-Brook Ice Cream Co.	University of Vermont Dairy Bldg.
Hathaway Bakeries	Ward Baking Company

Tell us your insulation problem. We'll be glad to tell you how **ALUMISEAL** can solve it, easily and economically. No obligation.

C. T. HOGAN & CO., INC.



383 MADISON AVE., NEW YORK 17, N.Y.

Over a Decade of Experience in Reflective Insulation

Architectural Engineering

PRODUCTS (Continued from page 253)

Water Pick-Up Machine

Described as being especially suited for any location where there are large floor areas that must be cleaned or dried, an *American* water pick-up machine is now available. In combination with an electric scrubbing machine, the water pick-up unit is said to make easy work of maintaining the largest floors in a clean and sanitary manner. The machine consists of a 1 hp motor, a large-capacity tank and a wide, heavy duty squeegee mounted as an integral unit on a sturdy three-wheeled dolly. When the



Water pick-up machine has large capacity tank, simplifies floor maintenance

machine is guided forward, suds and dirty water are picked up by vacuum, leaving a clean, dry path 29 in. wide. Special features include a cast aluminum pick-up unit with rubber squeegee blades, reported to pick up all the water with a single forward stroke, bumper guard wheels to prevent the machine from marring walls, baseboards or furniture, and a trailing wire arm which keeps electric wire out of the way. The height of the wire arm is adjustable and it swivels for easy action. American Floor Surfacing Machine Co., 518 So. St. Clair Street, Toledo 3, Ohio.

(Continued on page 260)

ART METAL

releases its
creative ideas on
INCANDESCENT
LIGHTING

Write for these and future
releases on ART METAL's
new product ideas.

These new products attain a distinction of imaginative design and purposeful performance through ART METAL's engineering vision and experience.

Write for these and future releases on ART METAL's new product ideas.

**ADVANCED
DESIGN**

ART METAL

**NEW
PRODUCT
RELEASE**

WIDE AREA PRISMATIC UNITS
Weather-Proof Construction

PERFORMANCE

Upward light from the lamp is reflected to useful down-ward light by the specular mirror reflecting surfaces of the hood. This downward reflected light and the downward light from the lamp is hence upward and downward by the prismatic glass in the extended light distribution pattern shown on the Castlesaver Distribution Diagram. The radius of effective light coverage is upwards of five times the mounting height above the ground or floor.

APPLICATION

The extended light distribution pattern which so effectively provides protection as well as utility lighting over wide areas, also provides high angle light for effective illumination of upper vertical surfaces. Suggested uses include:

WADING ENTRANCES
GATE ENTRANCES
GARAGE ENTRANCES
STORAGE AREAS
OUTLETS

SEAWARD SIDES
FENCE LIGHTING
SHEDS, AREAS
STORAGE AREAS

WADING
YARDS
GOLF COURSES
WALKWAYS

No. 2776

No. 2777

No. 2777

Manufacturers of Engineered Incandescent Lighting

NO HOUSE, REGARDLESS OF PRICE, NEED FOREGO THE BENEFITS OF OAK FLOORING

The benefits of oak are the basic flooring needs—beauty, economy, adaptability and “healthfulness”



In low-cost housing, no compromise need be made with such fundamentals as “healthfulness”, durability, and beauty. Opportunities to cut the costs of homes are best in finishing “frills” and the over-all size of the house.



Oak flooring, however, is one material that does provide basic fundamentals at little or no more than the cost of substitutes. Now, oak flooring can be laid over concrete slabs, using screeds set in mastic,* with grades of oak priced for the lowest cost homes.



Lifetime adaptability to all colors and all furnishings is one reason 85% of all prospective homeowners want oak flooring in their next home. Decorators, too, agree that oak flooring “goes” with every period, style and color combination. With oak flooring, decorating is simple.

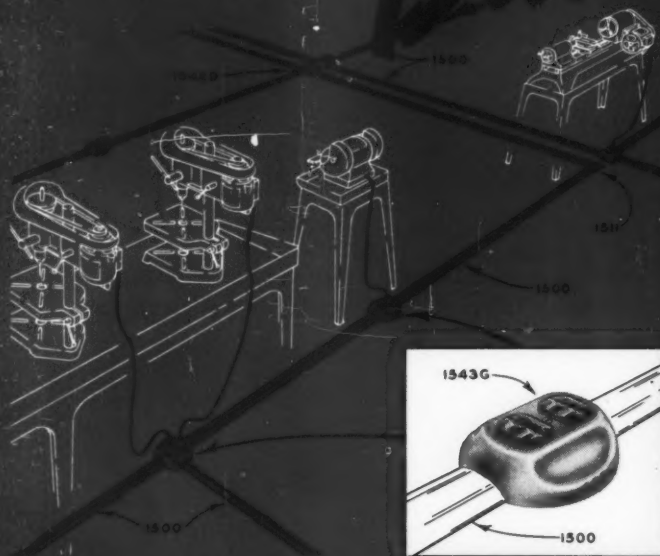
*SEND TO NATIONAL OAK FLOORING MFRS. ASS'N., STERICK BLDG., MEMPHIS 3, TENN., FOR FREE FHA-APPROVED INSTRUCTIONS FOR LAYING OAK OVER CONCRETE.

A two-part program
with a flexible wiring range



THE PANCAKE

Duet

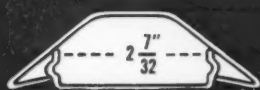


In busy industrial plants and offices, PANCAKE Outdoor Wiring Systems bring electrical connections right to the point of use. A safe, economical method of supplying adequate facilities for light and power... carrying current to small motors... work lights on machines... telephones and signal wiring... and other special low-voltage systems.

HERE'S THE DUET!



1500 PANCAKE



1500 PANCAKE

FLAT AS A PANCAKE... STRONG AS A BRIDGE

THE WIREMOLD COMPANY
HARTFORD 10, CONN., DEPT. F

Please send me a copy of the PANCAKE bulletin.

Name _____

Company _____

Address _____

City _____ State _____

THE WIREMOLD COMPANY
HARTFORD 10, CONNECTICUT

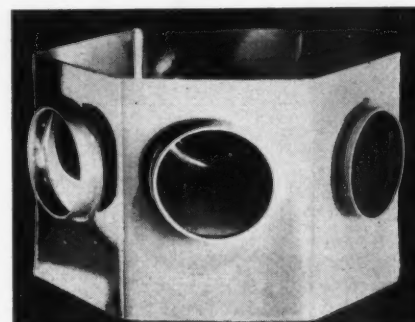
Architectural Engineering

PRODUCTS

(Continued from page 257)

Distributing Box For Sewage Disposal

The *Ideal* distributing box is a prefabricated unit for sewage disposal systems which is reported to assure uniform distribution to the entire drain field. When one line becomes clogged, the remaining lines share the load. The box is located at the heart of the system and has a removable top which makes for



Distributing box has removable lid for easy inspection of sewage system

easy inspection. Hexagonal in shape, the unit has one inlet and five outlets, sized for tight seal with standard field tile. It is made of heavy gauge welded steel with bituminous coating. When installed, it is imbedded in a concrete base about $\frac{1}{8}$ in. thick, and reportedly will not tilt after installation. The box will work on sloping ground or where a high water table exists, according to the manufacturer. Venable-Brown Co., Inc., 211 E. Fourth St., Cincinnati 2, Ohio.

Automatic Ice Maker

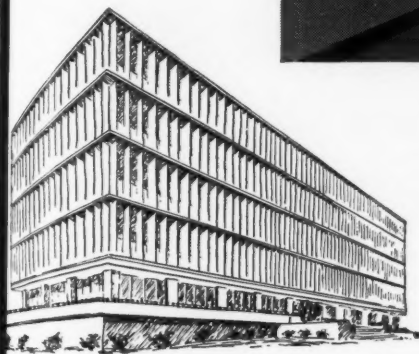
Said to be the smallest commercial automatic ice maker ever developed, the *York FlakIce* Model DER-2 is designed to produce up to 300 lb of ice per day in small clear fragments and without the employment of an auxiliary crusher. The machine is primarily intended to meet the needs of a wide variety of smaller commercial establishments where ice requirements do not exceed 250 to 300 lb daily. The ice fragments have a

(Continued on page 264)

ACOUSTICAL MATERIALS AT WORK



Board room with Armstrong's Travertone ceiling



THE PAN-AMERICAN LIFE INSURANCE COMPANY BUILDING, New Orleans

Architect: Skidmore, Owings, and Merrill

Associate Architect: Claude E. Hooten

General Contractor: George J. Glover Company, Inc.

Acoustical Contractor: Clifford A. King

The entire top floor of the new five-story Pan-American Life Insurance Company Building has a quiet dignity well suited to the executive offices it contains. Much of this dignified atmosphere can be credited to the acoustical material on the ceiling.

For here, in keeping with the need for beauty, fire safety, and acoustical efficiency, the architects chose Armstrong's Travertone—a fissured mineral wool material.

Travertone has many features that led to its choice: an attractive fissured surface, incombustibility, high light re-

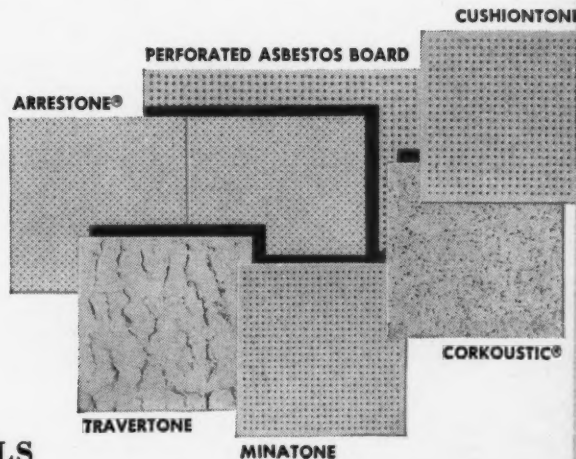
flection, ease of maintenance and, of course, effective absorption of irritating noise. Travertone was also well adapted to the installation of the recessed lighting and ventilating fixtures.

The complete line of Armstrong's Acoustical Materials offers you a wide range of special features. Your Armstrong Contractor is ready to give you helpful advice with no obligation. For free booklet, "How to Select an Acoustical Material," write Armstrong Cork Company, 2406 Stevens Street, Lancaster, Pennsylvania.

Perforated "metal-pan" units of Armstrong's Arrestone were used to sound condition much of the general office area in lower floors. Unusually high in efficiency, these units greatly reduce noise levels, improve office efficiency and morale. Arrestone is completely incombustible. Its white enameled surface is high in light reflection and easy to clean.



ARMSTRONG'S ACOUSTICAL MATERIALS





DOOR CLOSERS

EXTREMELY VERSATILE TO MEET EXACTING REQUIREMENTS



Silent . . . automatic . . . universal . . . simple yet positive speed controls . . . hold-open features for specialized applications such as hospitals, schools, banks . . . closers you can specify with confidence for your finest buildings.

GOOD BUILDINGS DESERVE GOOD HARDWARE



P. & F. CORBIN Division
The American Hardware Corporation
New Britain, Connecticut, U.S.A.

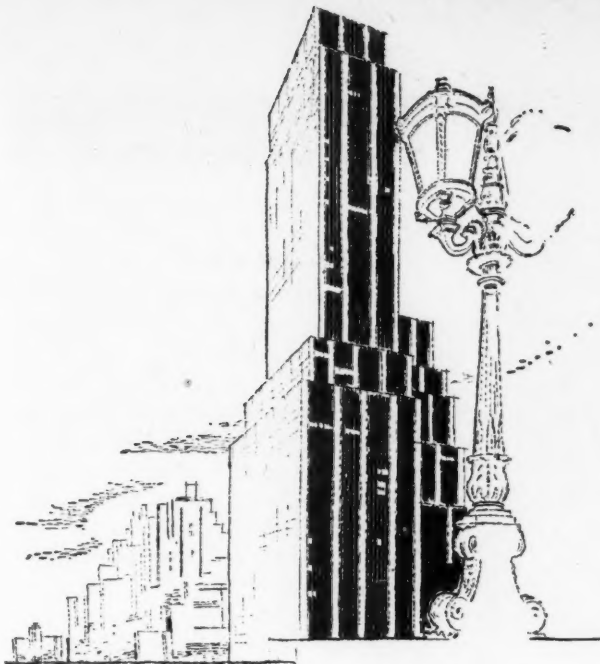


In 100
modern,
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All of t
Fibergl
Perfora
Sonofac
mainte
Fibergl
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For
Fibergl
telepho
Corpor

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DESIGN for Quiet, Firesafe BEAUTY

In 100 PARK AVENUE, Fiberglas* Acoustical Tile—the modern, low-cost, non-combustible acoustical material—hushes noise in over 150,000 sq. ft. of office space. It's specified by architects for a number of tenants because it offers a unique combination of values:

- Fire Safe
- High Acoustical Value
- Decorative Beauty
- Good Light Reflection
- Ease of Application
- Sanitary
- Cleanable and Paintable
- No Sustenance for Vermin
- Dimensional Stability
- Added Thermal Insulation
- Low Cost

All of the above values are to be found in the complete line of Fiberglas Sound Control products . . . Fiberglas Textured and Perforated Tile for smartness and beauty . . . new Fiberglas Sonofaced* Acoustical Tile where decorative beauty, ease of maintenance, and sanitary conditions are desirable . . . and Fiberglas Ceiling Board, the low-cost, large-area ceiling material that forms many attractive, modern-looking overhead patterns.

For complete design data on these products, contact your Fiberglas Acoustical Contractor listed in the yellow pages of your telephone book . . . or write to: Owens-Corning Fiberglas Corporation, Department 68-F, Toledo 1, Ohio.

OWENS-CORNING
FIBERGLAS

SOUND CONTROL PRODUCTS

*Fiberglas (Reg. U. S. Pat. Off.) Noise-Stop and Sonofaced are trade-marks of Owens-Corning Fiberglas Corporation.



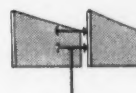
Above and below: Installation in American Airlines, Inc., Offices. Architect: Kahn & Jacobs—Acoustical Contractor: National Acoustics Co., N.Y.C.



Below: Installation in Canada Dry Ginger Ale, Inc., Offices. Architect: Carson & Lundin—Acoustical Contractor: National Acoustics Co., N.Y.C.



Acoustical
Tile



Noise-Stop*
Baffles



Ceiling
Board



Sonofaced
Acoustical Tile

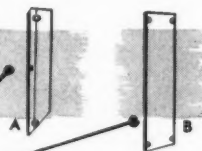


Call a

FIAT

**representative
on TOILET
COMPARTMENT
problems**

There's a FIAT representative near you—available on short notice. He has the answers to specification and installation problems that may help you . . . save you time—save your clients money.



Here's how this installation problem was solved

Large concrete window base presented difficulty. Bottoms of filler panel A and end pilaster were cut to fit diagonal slope of base. Room dimension was too short for six compartments; too long for five. Filler Panel B was added, creating neat appearance.

**COMPARE FIAT
ON THESE POINTS**

- ✓ ADAPTABILITY
- ✓ APPEARANCE
- ✓ QUALITY
- ✓ PRICE
- ✓ DELIVERY

MADE BY

FIAT

FIRST IN
SHOWERS

WHEN YOU SPECIFY FIAT, YOU SPECIFY QUALITY

TOILET
COMPARTMENTS
DRESSING
COMPARTMENTS
HOSPITAL
CUBICLES
PRESWOOD
COMPARTMENTS*

All metal compartments are made of stretcher-leveled furniture steel, cold rolled or galvanized bonderized . . . laminated filler cemented in place under pressure. Hardware and connections supplied. Compartments are finished with a baked-on primer coat and two coats of baked-on enamel in a choice of eight colors.

*Being used extensively for Army and Navy installations. Catalog on request.

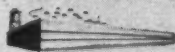
SEE SWEET'S **22b** ARCHITECTURAL
FI

. . . for detailed compartment information and the address of your nearest FIAT representative.

FIAT METAL MANUFACTURING COMPANY

THREE COMPLETE PLANTS—ECONOMY • CONVENIENCE • SERVICE

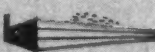
FIAT



Long Island City 1
New York



Franklin Park, Ill.
(Chicago Suburb)



Los Angeles 63,
California

In Canada: FIAT COMPARTMENTS are made by Porcelain and Metal Products, Ltd., Orillia, Ontario

Architectural Engineering

PRODUCTS

(Continued from page 260)

slightly curved shape, said to provide fast cooling of liquids, retard meltage, and provide greater effectiveness than ordinary crushed ice for food preservation and other applications. In the freezing-process, air is freed from the ice and precipitated chemical salts are carried off to the drain, reportedly furnishing ice purer than the water from which it is made.



Automatic ice maker for small commercial needs produces up to 300 lb per day

The machine has a hermetically sealed refrigerant-freezing unit, is air-cooled and can be plugged into an ordinary electrical socket. The complete unit is only 32½ in. high and 24¼ in. at the widest point. York Corp., York, Pa.

Patterned Heat-Absorbing Glass

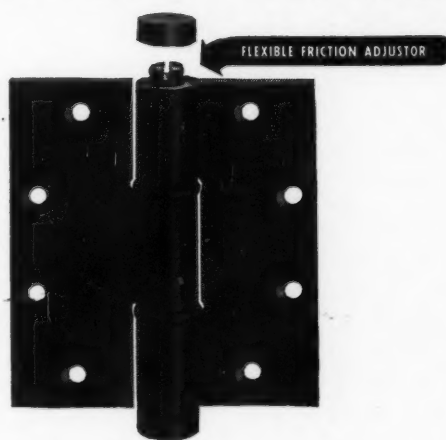
Aklo Fine-Tex, a patterned glass for commercial, institutional and industrial buildings, has been added to the line of heat-absorbing and glare-reducing glass products manufactured by Blue Ridge. Reportedly developed in response to a demand for decorative patterns, the new glass will be available in ⅛ and ¼ in. thicknesses and in a ¼ in. wired form for

(Continued on page 268)



HERBYAM
H. BRAMMEIER, JR.
FAMOUS COLLIERS' CARTOONIST

"EVERYTHING HINGES ON HAGER!*"



HAGER No. 1147
EXTRA HEAVY FRICTION-TYPE BUTT HINGE
Available also with "Hospital-Type" rounded top ends
to prevent attaching ropes, wires, etc.

ELIMINATE NOISY, SLAMMING DOORS!

Exclusive flexible friction adjustor in the barrel of Hager Friction-Type Butts controls the friction exerted to just the desired degree. Proper adjustment of friction pressure prevents doors from slamming shut . . . holds them open to any desired ventilating position.

Removal of screw-type-plug at top end of butt provides quick access to the slotted pin. A few screw driver turns in one direction exert additional friction that retards the ease of door movement; several screw driver turns in the other direction eliminate friction . . . allow door to silently float back and forth.

Specify Hager Friction-Type Butts in hospitals or other buildings where quietness is either desirable or a necessity.

C. Hager & Sons Hinge Mfg. Co. • St. Louis, Mo.
Founded 1849—Every Hager Hinge Swings on 100 Years of Experience



THE NEW
Crawford MARVEL-LIFT

Riviera

America's most beautiful GARAGE DOOR



The new Riviera is the most brilliant and versatile door design created in our 21 years of door specialization.

It has the gift of looking ultra-modern on a long, low rambling modern house and quietly dignified on a formal colonial.

It creates the effect of having been custom-built for any house you put it in but the price-tag says otherwise.

CRAWFORD DOOR COMPANY

Main Plant: 95-401 St. Jean Ave., Detroit 14, Michigan

EXCLUSIVE NEW MAGI-COTE PROTECTIVE TREATMENT

Every Crawford door is protected by the new Magi-Cote Process—a three minute immersion in clear Magi-Cote liquid which seals all wood surfaces against moisture, termites, fungi, dry-rot, etc.—exclusive in Crawford-built doors (east of the Rockies).



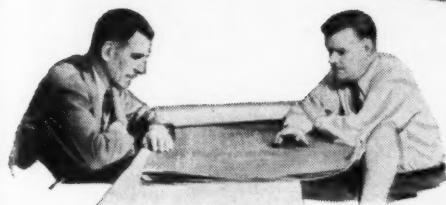
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HIGH QUALITY SCHOOLS

for 65 to 75% of prevailing area costs...



Gregson & Ellis schools do not skimp to achieve low cost. They

have the deluxe features—finest lighting, ventilation, P. A. system and such equipment—that earmark today's best schools. The economy derives from the architects' ingenuity in organizing the job; in using materials functionally without disguise, and from their intelligent approach to design and budget problems. The other source of Gregson & Ellis' low cost is the economy inherent in Robertson materials. Contractor for this job was the Central Construction Co., of Atlanta, Georgia.

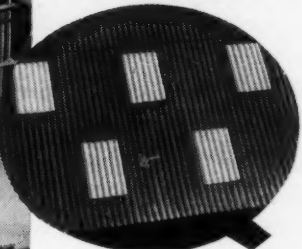
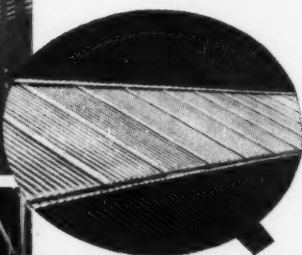
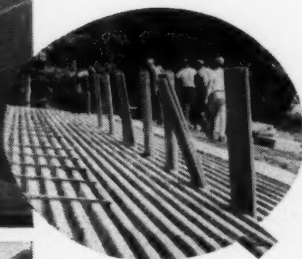
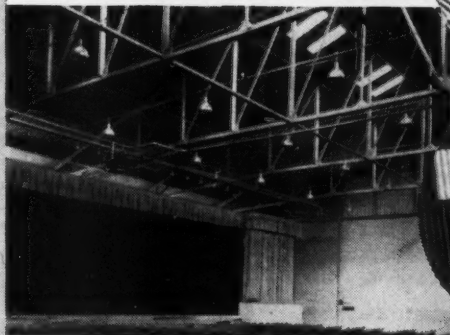
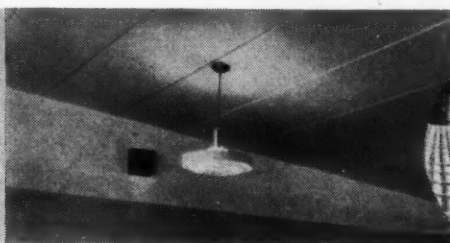


Complete figures, including costs, on these and similar schools are available for the asking

Also catalogs on Roof Deck, Skylights and Galbestos

showing how the materials can be used to reduce over-all weight and construction time.

Write to



ROBERTSON STEEL ROOF DECK

forms a flat, attractive ceiling requiring only a paint finish. By sloping, the ceiling has good acoustical qualities. On the Roof Deck is 2" of insulation and a twenty-year bonded built-up roofing. The insert shows one detail of efficient job organization—workmen placing insulation and waterproofing on roof. The long-span deck is welded to steel members imbedded in the masonry walls.

ROBERTSON CORRUGATED WIRE GLASS SKYLIGHTS,

used to daylight corridors, are a feature of all Gregson & Ellis schools. This scene is in the Jim Cherry School, Brookhaven, Ga., pictured above. This school with 16 classrooms, auditorium-dining hall, kitchen, offices, auxiliary rooms, public address system and other modern equipment was completed for \$6.25 per sq. ft.

16 ROBERTSON SHEETLITES,

set in a GALBESTOS roof, light this clean-cut auditorium. The structure is made entirely from noncombustible materials. This school at Manchester, Ga., has 27 classrooms, 3 offices, storage, toilet rooms and the 116' x 111' gymnasium-auditorium. It was built for \$4.60 per sq. ft. The \$217,000 total was \$3,000 less than the budget.

H. H. ROBERTSON COMPANY

2404 Farmers Bank Building
Pittsburgh 22, Pennsylvania



Offices in ALL Principal Cities
in the U. S. A. and Canada

World-Wide Building Service

Why a half BATH?

**WHEN WEISWAY MAKES A
FULL BATH EASILY POSSIBLE**



Weisway
CABINET SHOWERS

● Space-saving corner entrance Weisways combine with other fixtures to provide complete bathrooms in small floor area.

Wherever you plan separate shower baths Weisway is your safe, dependable answer. Walls are Bonderized, galvanized heavy gauge steel with two separately baked on coats of enamel — corners sealed in compression tight joints. Vitreous porcelain enamel receptor, acoustically insulated, has Foot-Grip, No-Slip floor — safe, positively non-absorbent, easy to keep clean and sanitary. Weisway quality insures client satisfaction, protects your reputation. Write for catalog with complete specification data.

HENRY WEIS MANUFACTURING CO., INC.
603 WEISWAY BUILDING, ELKHART, INDIANA

Architectural Engineering

PRODUCTS

(Continued from page 264)

skylights and fire-retardant glazings. For maximum eye comfort, it is advised that the glass usually be specified in frosted finish. Libbey-Owens-Ford Glass Co., Nicholas Building, Toledo 3, Ohio.

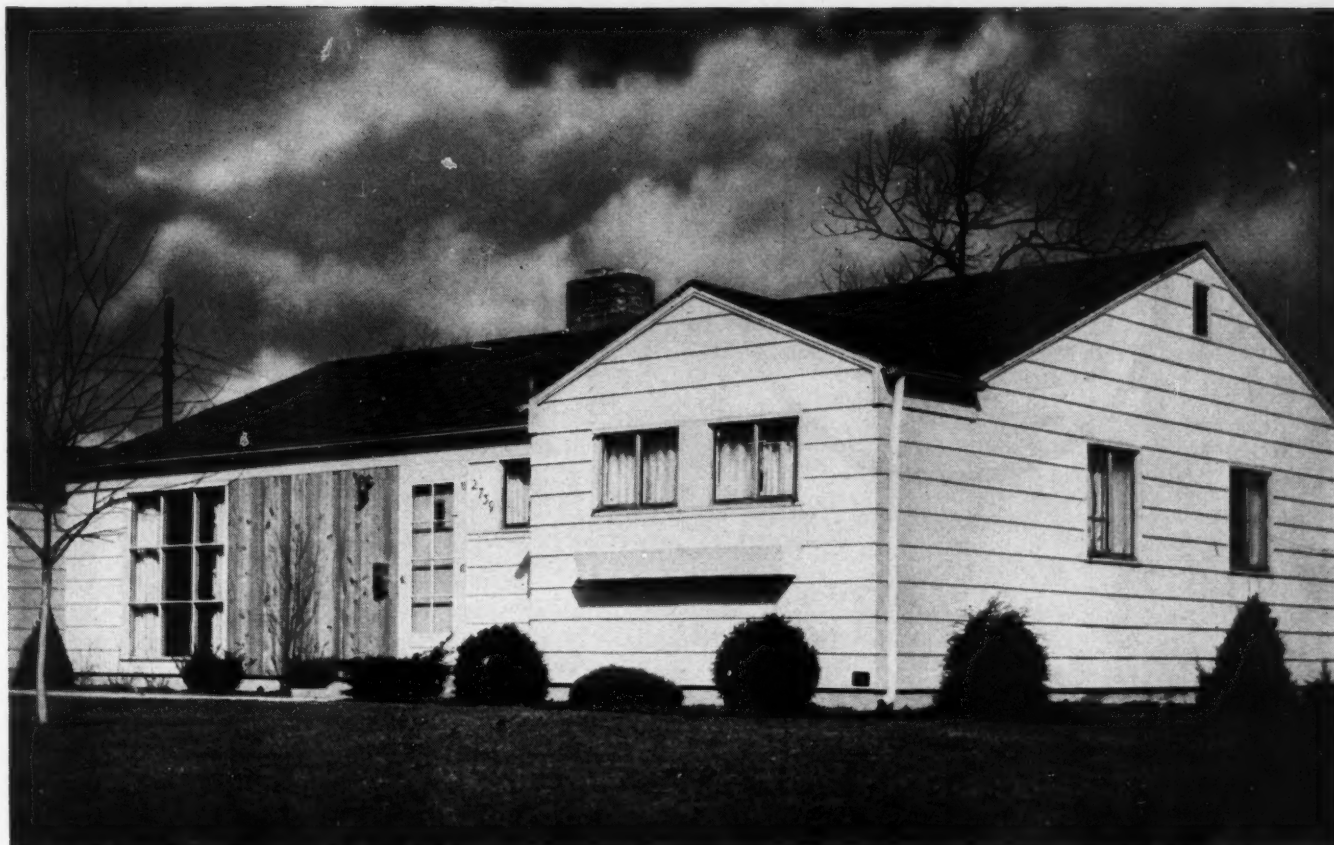
Storm-Screen Window

Recent addition of a storm-screen combination to the manufacturer's products is said to make a complete unit of the *Andersen Pressure Seal* double-hung window. The new storm-screen is available from distributors' stocks, whereas formerly screens for the *Pressure Seal* unit had to be purchased from local millwork sources. It features a full length wood screen reinforced by a narrow aluminum center bar. Two lightweight wood storm panels fit into it from the inside and are held in place by thumb-operated fasteners. The simplicity of the product is reported to make for convenience, and since the screen remains on the window all year, it is also said to reduce storage problems and furnish extra insulation in winter. The combination hangs from standard hardware friction operators. Andersen Corp., Bayport, Minn.

Concrete Aggregate

In the construction of a steep-pitched roof for the United Presbyterian Church of Rock Island, Illinois, designed by R. C. Sandberg, *Coralux Perlite* concrete aggregate was successfully employed, it is reported. Because of the steep pitch, it was necessary to have a material which could be mixed with a minimum amount of water, so that the concrete would not slide under application, but would still provide sufficient insulation. The roof is of precast concrete slabs, wood lathed with sleepers 16 to 24 in. on center, stripping placed approximately 2 in. apart, and with 2½ in. of the aggregate poured between the lath strips. 300 bags of the material were used on the job, mixed 6 cu ft of aggregate to 1 bag of compound and approximately 12 gal. water. F. E. Schundler & Co., Inc., 504 Railroad St., Joliet, Ill.

(Continued on page 272)



THERE'S SALES APPEAL IN GPX SIDING

GPX plastic-faced plywood's unmatched features and cost-cutting advantages are dramatically illustrated by the Place Construction Company's use of GPX Exterior Paint Grade for lapped siding of enduring beauty.

This leading Indiana builder cut large, light-weight panels of GPX into 12-in. strips. Labor costs and time are saved because GPX covers large areas quickly—will not check or crack. Painting costs are cut because there's no need for prime coats. GPX's dense, smooth surface takes finishing coats readily, extends the life of the paint over 50% (a strong point for prospective buyers!). There's added beauty, too, in the deep shadow lines provided by these $\frac{5}{8}$ -in. thick strips.

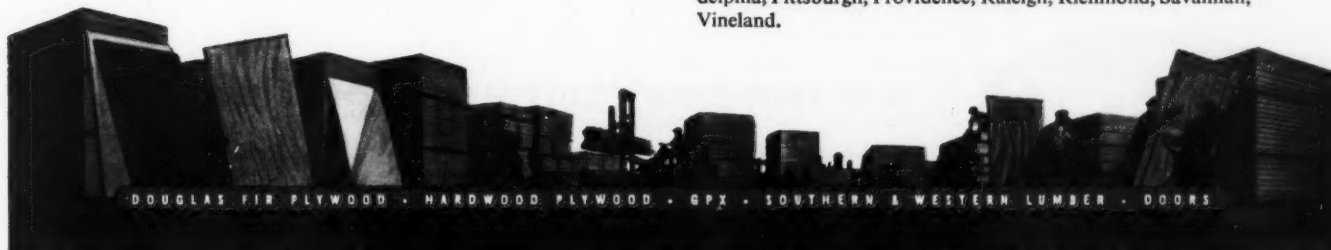
Year after year, GPX remains impervious to the

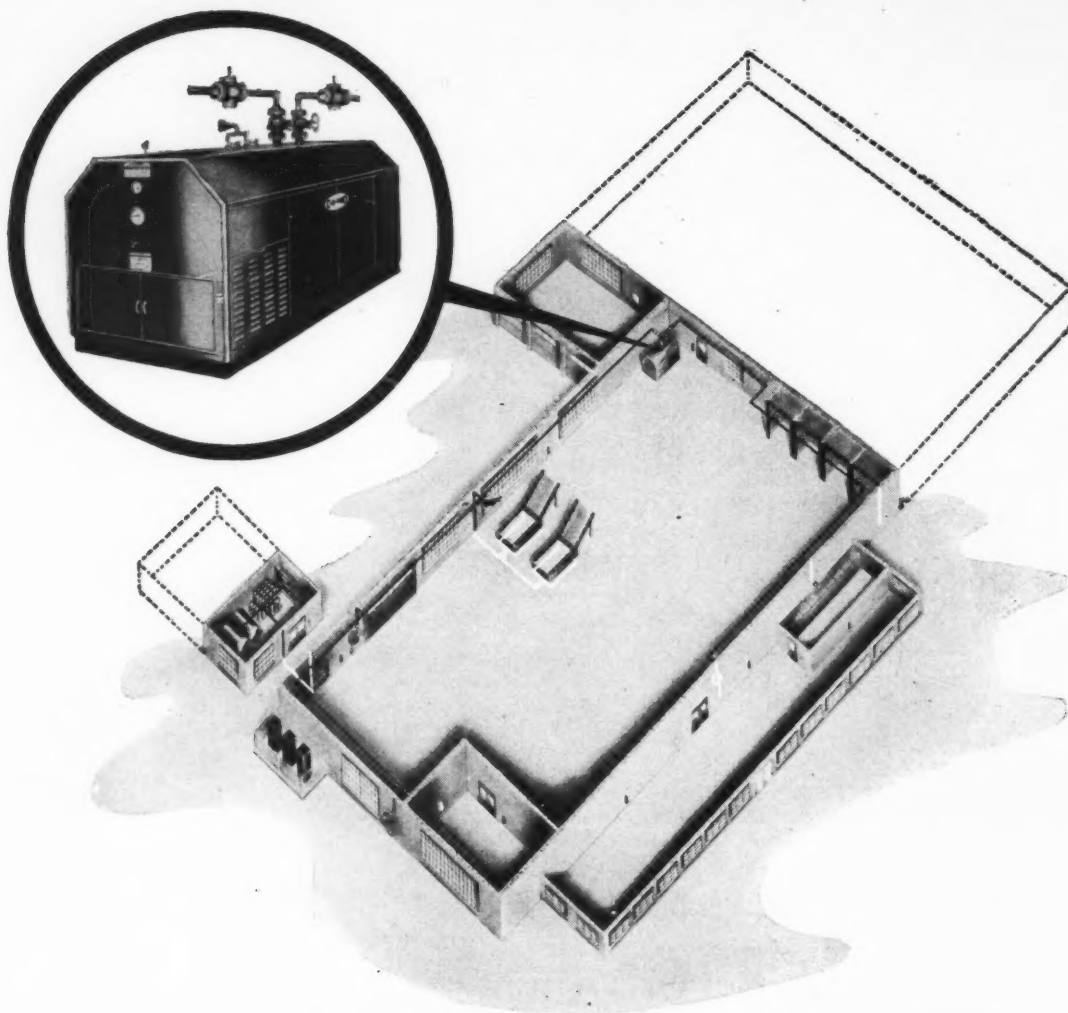
effects of weather extremes, free from cracks or checking.

Available in four grades and five thicknesses, GPX offers a new degree of building versatility. If you have a construction problem, bring it to Georgia-Pacific's GPX technical staff. Call your G-P representative or write:


GEORGIA—PACIFIC
PLYWOOD COMPANY
 608-6A North Capitol Way, Olympia, Wash.

OFFICES OR WAREHOUSES IN: Augusta, Birmingham, Boston, Chicago, Columbia, Detroit, Lancaster, Louisville, Memphis, Nashville, Newark, New Hyde Park, Olympia, Orlando, Philadelphia, Pittsburgh, Providence, Raleigh, Richmond, Savannah, Vineland.





EXPANSIBLE FIRESAFETY

from a single LOW PRESSURE CARBON DIOXIDE storage tank

When expanding your plant, you can't afford to wait for additional fire protection...you need the proper amount at once. However today, material priority regulations slow you up considerably...these delays hold back vital production and resulting revenue. Install a C-O-TWO Low Pressure Carbon Dioxide Type Fire Extinguishing System in your plant now and new construction to come will be firesafe from the start.

With a C-O-TWO Low Pressure Carbon Dioxide Type Fire Extinguishing System, simple piping, running from one centrally located storage tank, instantly transports clean, non-damaging, non-conducting carbon dioxide anywhere in the plant area...to flammable liquids, electrical equipment, storage spaces, manufactur-

ing processes and record vaults. Fire at any protected location is extinguished in seconds with an absolute minimum of expense and interruption.

Future plant expansion is quickly and economically provided for by initially installing an oversized low pressure carbon dioxide storage tank...capacities range from one to fifty tons. Discharge facilities can be either manual mechanical, manual electric, automatic mechanical, automatic electric or a combination of these...all are easily extensible at a later date.

Don't take chances with future delayed installations; secure the benefits of highly efficient fire protection engineering today...our extensive experience over the years is at your disposal without obligation. Get the facts now!



C-O-TWO FIRE EQUIPMENT COMPANY

NEWARK 1 • NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada

Affiliated with Pyrene Manufacturing Company

MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

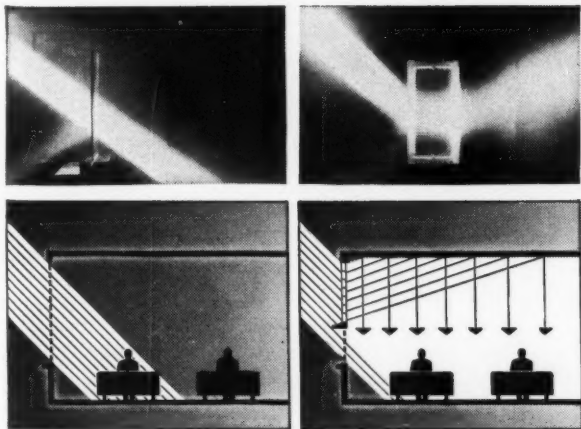
Squeeze-Grip Carbon Dioxide Type Fire Extinguishers • Dry Chemical Type Fire Extinguishers • Built-In Smoke and Heat Fire Detecting Systems
Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems



Aladdin Industries, Nashville, Tenn.
Architect: Spencer J. Warwick

Daylight Engineering MASTERS

PROBLEMS OF DAYLIGHT CONTROL



Photograph and illustration to the left, above, show what happens when light beams strike an ordinary window. Notice how workers near windows suffer from harsh brightness and glare while others have inadequate light. To the right, notice how the built-in prisms in Insulux Light Directing Glass Block throw light up, and direct down to task. Result is even, diffused light over all parts of the room.

IN MODERN ENGINEERING, plant lighting—particularly daylighting—is often considered to be almost as important as machinery and methods. Daylight Engineers have found that correct daylighting not only increases employee efficiency and cuts accidents, but reduces overall lighting costs.

One of the widely used ways to make maximum use of daylight is with an Insulux Fenestration System with Insulux Light-Directing Glass Block. The ribs in this block pick up light from angles formerly considered unusable. During all parts of the day, the prisms

within the block direct daylight up to ceilings from where it is directed down to working surfaces. Annoying glare and harsh contrasts are eliminated.

Insulux Glass Block® panels assure better daylight for occupants and reduced operating costs for owners.

A Daylight Engineer is ready to bring these benefits to your buildings . . . ready to help you plan an Insulux Fenestration System to meet your exact requirements. Just write Insulux Division, American Structural Products Company, Dept. AR6, Box 1035, Toledo 1, Ohio. *Subsidiary of Owens-Illinois Glass Company*

INSULUX FENESTRATION SYSTEMS
—by the leaders of Daylight Engineering

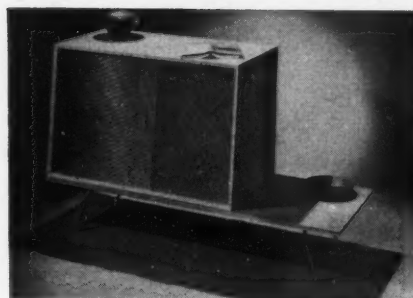
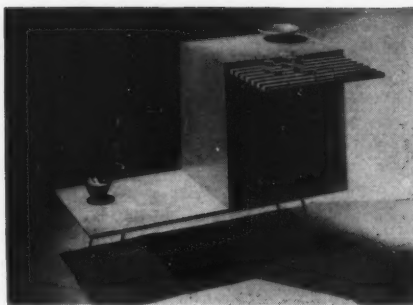


PRODUCTS

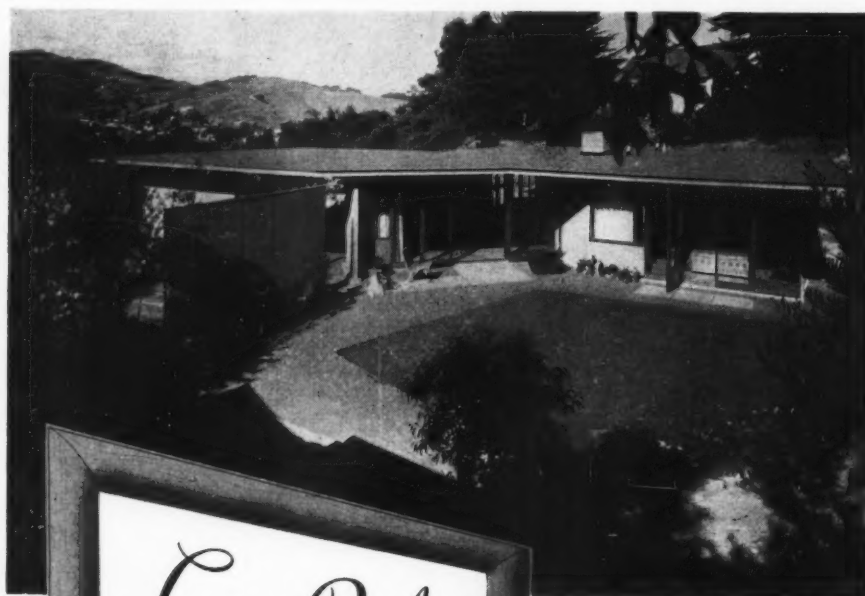
(Continued from page 268)

New Contemporary Furniture Line

The combining of birch and walnut has been successfully brought about in the new *Integrator Group* of contemporary furniture. Using birch, the less expensive of the woods, in the larger but least seen areas of the pieces, and highlighting the smaller, but more eye-



Storage cabinet (left) uses alternating birch and walnut strips. Unit at right has sliding Magnalite glass doors



Architect: Joseph Allen Stein
San Francisco

Lasting Quality
with
CABOT'S COLLOPAKES

When you specify Cabot's house paint — Gloss Collopakes — you and your clients are assured a beautiful finish that will stay bright and cheerful for years. Cabot's Patented Collopping process inseparably unites pure pigments and wear-resistant oils. Results in a porcelain-smooth finish that *lasts* . . . won't collect dirt.

Cabot's Collopakes come in a wide variety of lively, attractive non-fading colors, many available from no other source. If you like green for example you have a choice of 8 different shades in Cabot's Gloss Collopakes.

Write Today for complete color card showing 32 different shades. Samuel Cabot, Inc., 629 Oliver Bldg., Boston 9, Mass.

CABOT'S COLLOPAKES

catching areas with walnut — in a darker tone — a pleasing effect is obtained. Consisting mainly of case pieces and occasional tables, the line also includes a few unusual chairs and sofas. Doors of cabinets may be fabric, Magnalite glass, a contrasting darker wood, or alternating walnut and birch strips. By using vertical hand pulls on the drawers, easier operation is said to result. Bases are available in three sizes, offering many possibilities of arrangement, and are made with either wood or polished chrome metal legs. An added feature of the bases is that they make handsome coffee tables. The group is made by the Pine and Baker Furniture Company in Cambridge, Mass. Available at We Moderns, 227 E. 67th St., New York, N. Y.

Air Conditioning Unit

A new *Vornado* air conditioner now being manufactured in a $\frac{3}{4}$ ton model will eventually also be produced in $\frac{1}{3}$, $\frac{1}{2}$, 1 and $1\frac{1}{2}$ ton units, according to the manufacturer. Production of the other models, however, will be dependent upon availability of materials. Among the features of the field-tested units is a new method of air distribution, employing twin air directors which are reported to permit directional draft-free flow of cool air to different parts of a room simultaneously and with a velocity that gives deep penetration up to 30 ft into the room. The unit also employs a pressurized exhaust system to provide reduction of the cooling capacity from 8800 to 7700 Btu per hr. When the exhaust damper is opened, air is picked up immediately in front of the twin blower discharge, exhausting outside a portion of the air being removed and reducing air flow through the cooling coils. The conditioner is powered by a $\frac{3}{4}$ hp motor-compressor unit and is rated at 8800 Btu max. O. A. Sutton Corp., 1812 W. Second St., Wichita 1, Kan.

(Continued on page 276)

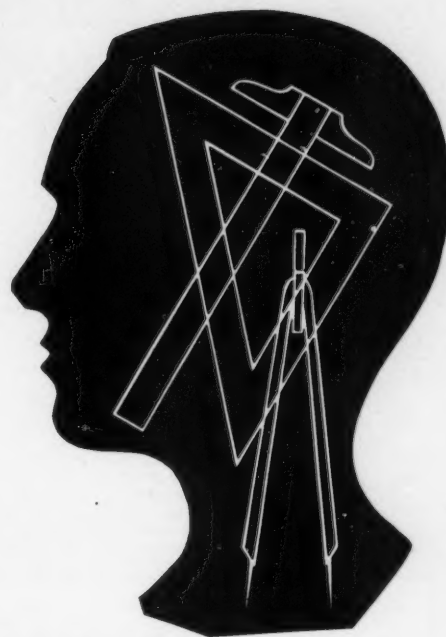
MIRACLES IN METALS

SEALUXE metal-glass facades are creating a revolution on the skyline. They are functional! They are beautiful!



Sealuxe Metal-Glass Facades
Employers Insurance Building, Dallas, Texas
George L. Dahl, Architects & Engineers

**All Sealuxe Installations are erected
by Universal's own field organization!**



Mr. Architect, let Universal help solve your design and engineering problems. Universal Corporation has authorized agents in ALL of the architectural centers to assist you with your preliminary drawings.



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- Cellular Spandrels and Fascias
- Rectangular Fins
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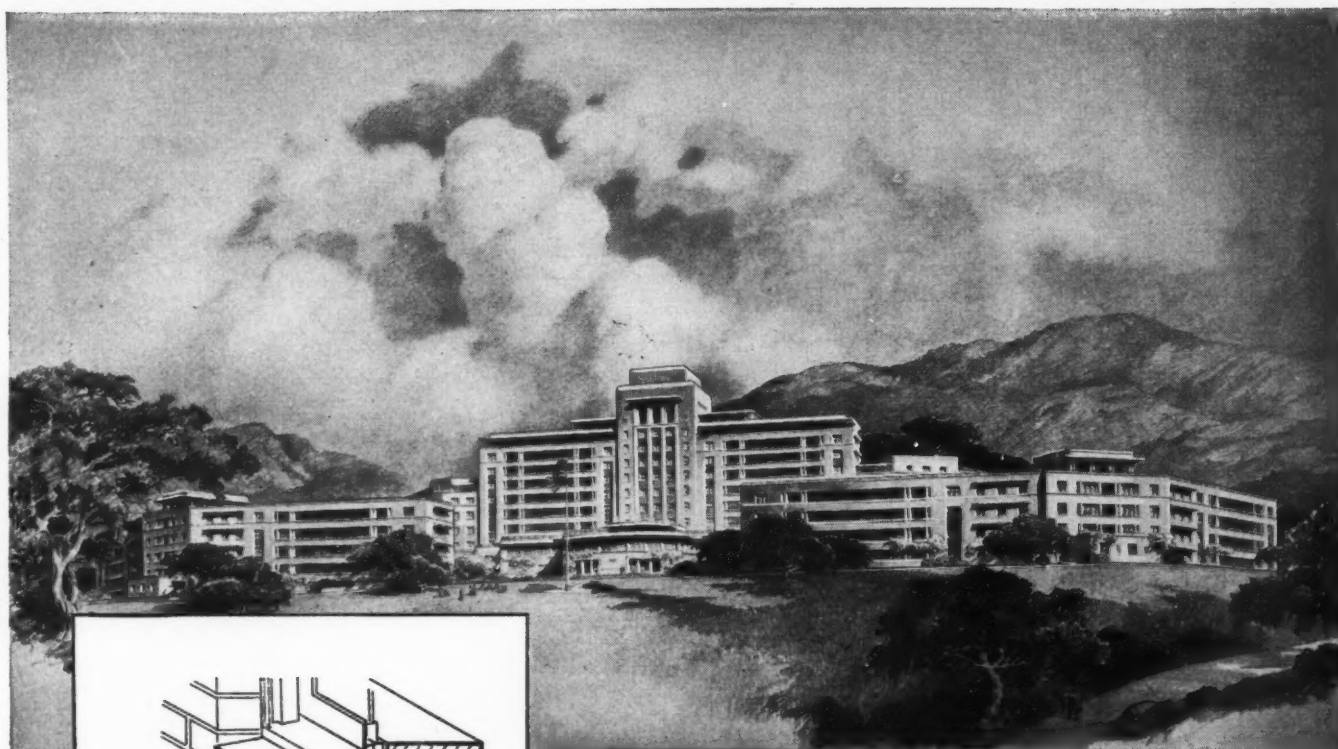
J. P. TRAVIS, President

Universal

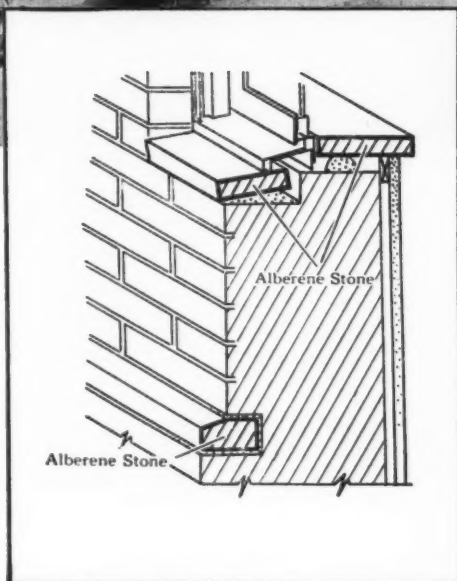
CORPORATION

6710 Denton Drive, Dallas 9, Texas





*Tripler General Hospital, U. S. Army Medical Dept., Hawaii
— Architects: York and Sawyer, New York City. 1½" Alberene slip sills.*



Detail showing 1½" thick slip sill with 1¼" stool and 2¼" belt course.

sills, stools, and trim of **ALBERENE** stone are **DURABLE and ECONOMICAL**

Regular Grade Alberene Stone is an ideal material for exterior trim because it can be cut into thin sections, permitting substantial economies. It offers freedom to the designer—by making possible greater reveal, to give just one example.

The stone has no cleavage planes, is dense, non-absorbent, and chemically-resistant. It is free of maintenance cost. Its color—silver gray in rubbed finish and a pleasing blue gray when honed—harmonizes well with almost any color scheme.

Where a darker color is desired, we suggest

Alberene Serpentine. It is a darker gray in rubbed finish, blue-black when honed, and blue-black or black when polished.

The high chemical resistance of both stones, which has made them favorites for use in laboratory equipment, also makes them ideal for window stools in laboratory buildings.

Since there is a decided difference in price between Alberene *Regular Grade* and *Serpentine*, architects' specifications should be carefully worded so as to clearly call for the type desired. Ample supplies of both materials are available.

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"BURNING COAL THE MODERN WAY CUT OUR POWER COSTS \$51,000 A YEAR!"

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labor force 47%!"



says Mr. George E. Bennett, Supt. Motive Power,
Chicago & Eastern Illinois Railroad.

"We recently modernized the power plant at
our Oaklawn Shops in Danville, Illinois.
The savings we've realized in labor and fuel
proved to us you can't beat *bituminous*
coal burned with modern equipment."



Here's the new power plant of the C&EI Railroad's Oaklawn Shops at
Danville, Illinois. By burning coal the modern way this plant saves a total
of \$51,180 a year—will pay for itself in less than seven years.

This is a view of the firing aisle showing the
spreader stokers which are fed by a weigh larry.
Three new boilers now do the work that formerly
required seven. Man-days per week required to op-
erate the plant have been reduced from 112 to 59!



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coal gives you all these no matter how you burn it.

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Get more steam for every dollar—burn coal in a
modern combustion installation. Cut your labor costs
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If you call in a consulting engineer—he can show
you how coal can do a better job for you with equip-
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Of all the fuels, coal alone has virtually inexhaus-
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the world's most productive and efficient coal in-
dustry. That's why you can count on coal for depend-
able supply, relatively more stable prices—now—and
in the future, too!

**If you operate a steam plant, you can't
afford to ignore these facts!**

- COAL** in most places is today's lowest cost fuel.
- COAL** resources in America are adequate for all
needs—for *hundreds of years* to come.
- COAL** production in the U.S.A. is highly mechanized
and by far the most efficient in the world.
- COAL** prices will therefore remain the most stable of
all fuels.
- COAL** is the safest fuel to store and use.
- COAL** is the fuel that industry counts on more and
more—for with modern combustion and han-
dling equipment, the inherent advantages of
well-prepared coal net even bigger savings.

BITUMINOUS COAL INSTITUTE

A Department of National Coal Association, Washington, D. C.

FOR HIGH EFFICIENCY  FOR LOW COST
YOU CAN COUNT ON COAL!

PRODUCTS

(Continued from page 272)

Aluminum Doors and Frames

Complete door and frame installation in less than 30 minutes is reportedly afforded by *Truline* aluminum flush doors and companion frames. Fitting, planing, sawing and painting are said to be eliminated with the doors, which are made from aluminum sheet panels bonded to U. S. Plywood's phenolic

impregnated honeycomb core.

The core is vulcanized to the panels by a process which makes a bond of great strength, hardness and elasticity, and, according to the manufacturer, will remain completely stable from minus 20 deg F to 150 deg F. The doors are also extremely light in weight and can be easily handled and shipped.

Frames are provided with multiple clamp screws and are designed for positive clamping on reasonably smooth and even surfaces. Design of the frames allows for installation in openings after all rough work and painting has been



**Low cost—
low contour;
Swartwout Airmover combines
these important advantages
in large scale ventilation**

You can make wide use of Airmover's many advantages for a large variety of buildings. In this exclusive Swartwout Ventilator design you get (1) great exhaust capacity without power cost; (2) low, spreading contour that eases roof load, enhances the building's appearance, and avoids stays and guy-wires; and (3) provides lowest cost ventilation per square foot of roof opening.

Airmover can be applied to any type of roof. It's completely weatherproof; has adjustable damper for varied opening. Its low-air-friction design assures high capacity gravity exhaust. Write for Folder 326G.

18511 Euclid Avenue, Cleveland 12, Ohio
The Swartwout Co.
Roof Ventilators and Ventilating Louvers
POWER PLANT EQUIPMENT • PROCESS INDUSTRY CONTROLS



Aluminum flush door and frame features fast installation, durability, economy

finished. Stiles are solid aluminum extruded sections with integral provision for interlocking hinges.

The doors are 1 $\frac{3}{8}$ in. thick, have a satin finish which may be repainted if desired, and are reportedly resistant to sound and thermal transmission. Installation brackets, hardware and lock sets are furnished with the doors. Hunter Douglas Corp., Riverside, Calif.

Electric Appliances

Announcement has been made of three new electric kitchen appliances, including two refrigerators and one 40-in. range. The *Model RO-20 Range* was designed for families with smaller budgets, but has many of the features of the more expensive 40-in. models. It has a convenient cooking lamp on the top and two 6-in. and one 8-in. cooking units plus a Thermizer Deep-Well Cooker. Ample storage space is provided in a large storage drawer.

One of the refrigerators, the *MO-81P Model*, has a storage capacity of 8.1 cu ft and will store up to 41 lb of frozen food in the full-width Super-Freezer Chest. Eight lb of ice can be frozen in the trays and the model also features a full-width plastic Chill Drawer, adjustable shelves and two Hydrators. The *SO-110 Model* has a storage capacity of 11 cu ft and can store 29 lb of frozen food. Two stack-up Hydrators have a 23.4 qt capacity and there are two half-shelves and a swing-down utility shelf. Frigidaire Div., General Motors Corp., Dayton 1, Ohio.

(Continued on page 280)



Who put a bonus on the roof?

It's no mean trick to turn a problem into a bonus. But the owners and builders of New York City's new 27-story Sinclair Oil Building did it. Here's how.

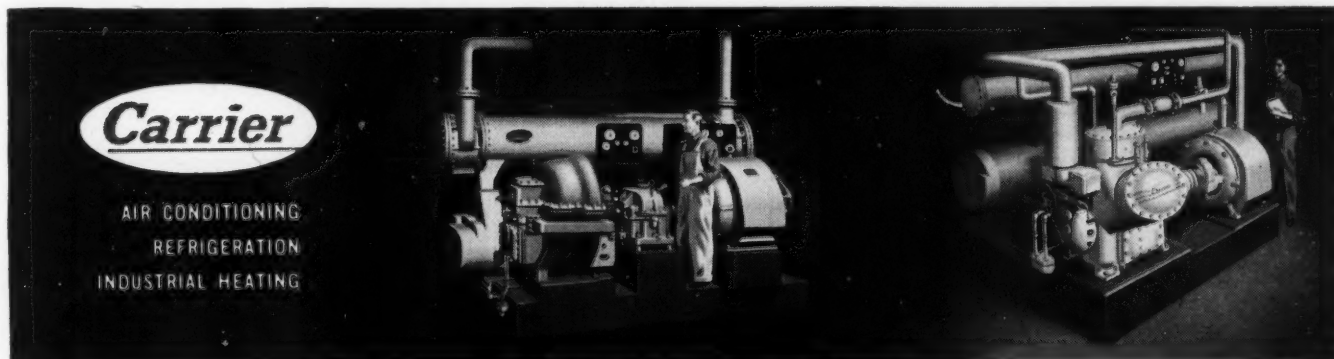
Problem: because there was a bed of solid rock beneath Fifth Avenue and 48th Street, the cost of blasting for a sub-basement refrigerating plant for air conditioning would have been terrific. **Solution:** Carrier Absorption Refrigerating Machines chill water with steam by absorption. They have no major moving parts and are practically vibrationless. So it was practical to put them on the roof.

Bonus: Instead of long, costly condenser water lines, and pumps with extra horsepower and extra-heavy casings to withstand the hydrostatic pressure of 27 floors which an ordinary basement plant would have required, the roof-top installation used short water lines and pumps with standard casings . . . a clear saving of some \$25,000 on first costs alone!

Another bonus: the Carrier Absorption Refrigerating Machine handles extremely light loads automatically with high efficiency. This is mighty important in a year-round air conditioning system like Sinclair Oil's, where only a small amount of refrigeration will be needed during cool weather.

The Carrier Absorption Refrigerating Machine is built in five sizes, from 115 to 350 tons. Maybe it can help *you* turn a problem into a bonus, too. The nearest Carrier office will give you all the information you want. Or write for our folder, "Absorption Refrigerating Machines." Carrier Corporation, Syracuse, New York . . . *for 50 years — the people who know air conditioning best.*

Architects,
Carson & Lundin;
consulting engineers,
Jaros, Baum & Bolles;
general contractor,
Turner Construction Co.;
owner,
Massachusetts Mutual
Life Insurance Co.;
agent,
Leonard J. Beck, Inc.



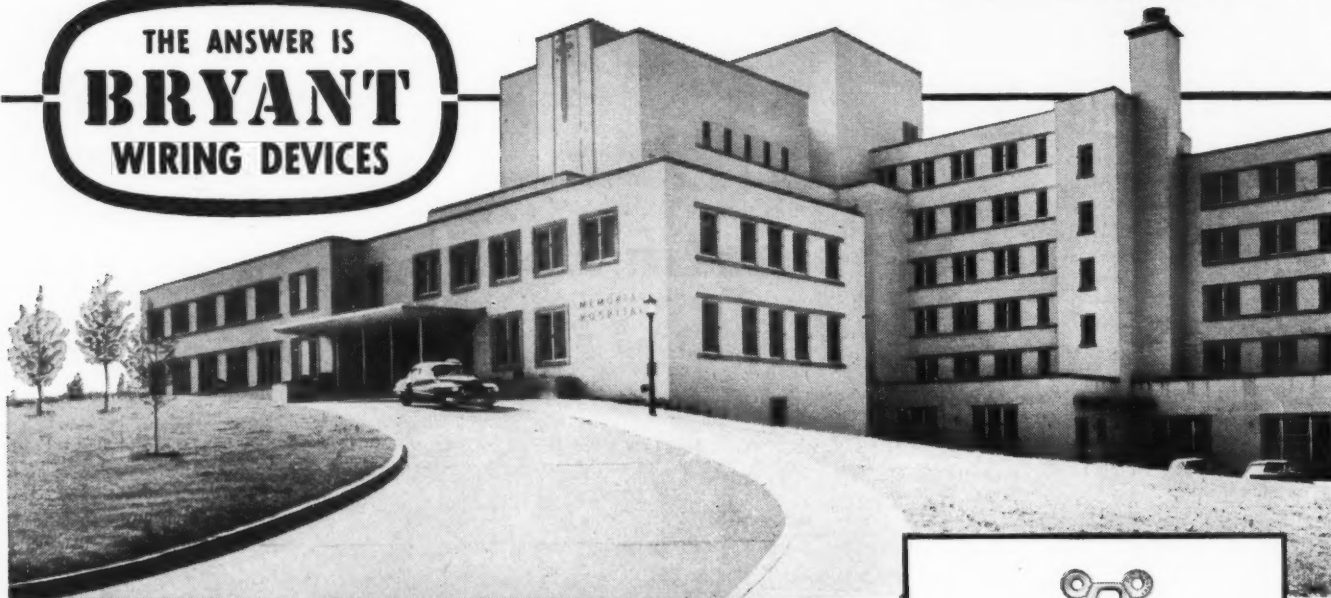
Your particular chilled water system might best be handled by the Carrier Centrifugal Refrigerating Machine.

In many applications, the Carrier Reciprocating Refrigerating Machine — a single package — is the most economical choice.

at

New Memorial Hospital

(Chattanooga, Tenn.)



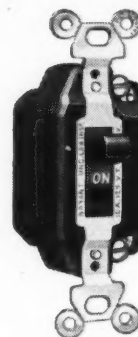
Architect— Kaiser, Neal & Reid—Pittsburgh, Pa.
Assoc.— W. A. Martin—Chattanooga, Tenn.
Gen. Contractor— Thompson & Street—Charlotte, N. C.
Elec. Contractor— W. C. Teas Co., Chattanooga, Tenn.

From foundation to roof, the keynote at this big new hospital is dependability—dependability right down the line. That's how a hospital has to function.

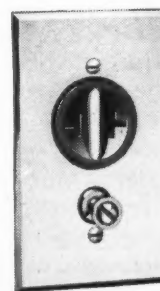
And when it came to dependable wiring devices, the choice went to Bryant—because Bryant devices are known for their quality of materials, precision engineering and superior manufacturing that give efficient, long-life service.

For example, the Bryant 4961 "T" rated, 10 Ampere switch—built for years of use where dependability is a "must." And the Bryant 3751 Fan Hanger—a rugged, special purpose outlet that provides an electrical connection and sturdy support for fans. These and other Bryant quality-made devices provide the dependability that Memorial Hospital required.

Bryant offers a full line of superior wiring devices from which to choose. Specify Bryant quality to get long-life dependability.



4961



3751

THE BRYANT ELECTRIC COMPANY
Bridgeport 2, Connecticut

Chicago • Los Angeles



*Specify Bryant Devices
from your
Electrical Distributor*

J-99872

NOW

FINISHED DESIGNS of REINFORCED CONCRETE members ALL WORKED OUT!

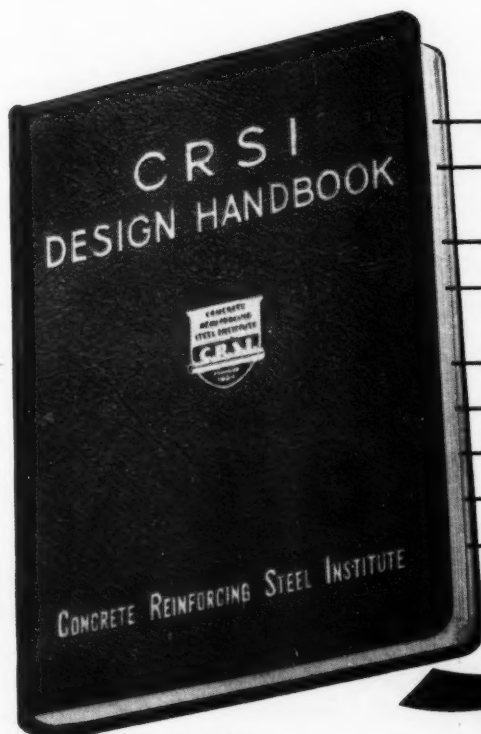
**NO FORMULAS
NO CALCULATING**

Here's a new tool that practically does your designing for you . . . on any type of reinforced concrete member! This unique book eliminates all confusing formulas, all time-consuming calculations—you simply *read off the answers* to your reinforced concrete design problems!

Now published after six years of preparation, the *CRSI Design Handbook* has tables covering every type of reinforced concrete member. All you do is apply span and load data to the correct table—then immediately read off the exact concrete dimensions and reinforcing steel data. Latest building codes are followed throughout. A wealth of miscellaneous information on reinforced concrete design is also included.



**412 PAGES
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Prepared under the direction of the
Committee on Engineering Practice,

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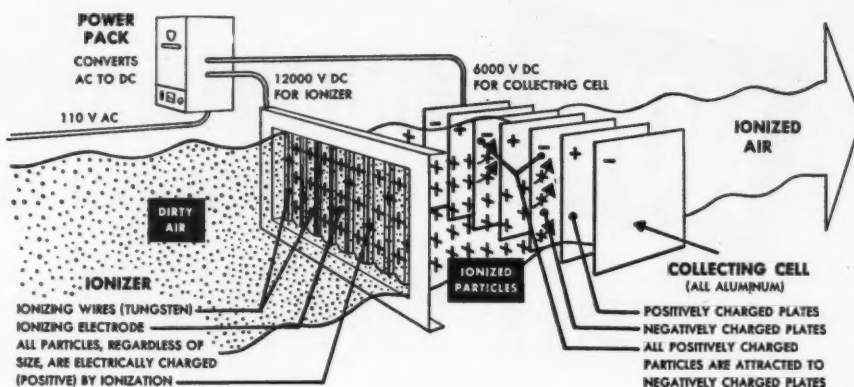
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PRODUCTS

(Continued from page 276)

Electric Air Filter

An effective method of providing air free of dust, dirt, smoke, bacteria, pollen and other air-borne contaminants is reportedly effected by the *Trion* system of electrostatic air cleaning, which has been successfully employed in a variety of large and small-scale installations. The equipment, according to the



Electrostatic air cleaning system traps dirt particles, frees air from impurities

manufacturer, removes all particles, regardless of size, from air streams, including particles less than $\frac{1}{100}$ the size of bacteria. When subjected to the U. S. Bureau of Standards Discoloration test, in which air samples are drawn through chemical filter paper, the system is said to have been rated at 90 per cent efficiency.

When particles in the air pass through the equipment they are given a positive electrical charge by a high-voltage ionizing screen. They are then attracted to collecting plates which are negatively charged, and the air passes through devoid of impurities. A water-wash system provides for periodic cleaning of the collecting plates without the necessity for maintenance personnel to enter the ductwork for the operation.

Complete built-up systems for large installations, custom-built "packaged" units, and standard "packaged" units are all available from the manufacturer. Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.

Vynlite Plastic Window Shade

Made of flame-resistant Vynlite plastic, the *Stoplite Plastishade* is reported to be completely lightproof, flame-proof, tearproof and washable. The color, a soft-hued mist grey, blends pleasantly with most decorating schemes.

Besides keeping sunlight out, the shade also allows privacy at night. Claimed to be resistant to moisture, mildew, oils, grease and most chemicals, it may be easily washed with soap and water. Stock shades available in 36, 42, 48 and 54-in. widths and in six, seven or eight ft lengths. Also made to order in widths to 90-in., lengths to nine ft. Chas. W. Breneman Co., 2045 Reading Road, Cincinnati 2, Ohio.

(Continued on page 284)

of course Van equipment in this modern office building

- More than a year ago, employees of Phillips Petroleum Company at Bartlesville, Oklahoma, began to enjoy the many facilities offered in this beautiful and newly constructed Adams Building . . . not the least of which is the Van-equipped food service.
- For over a century operators and administrators of restaurants, cafeterias, hotels, hospitals, schools and their architects have recognized the high standards, economy and efficiency of Van equipment for the preparation and serving of food.
- Whether you need new kitchen or modernization, call Van now.

The John Van Range Co.

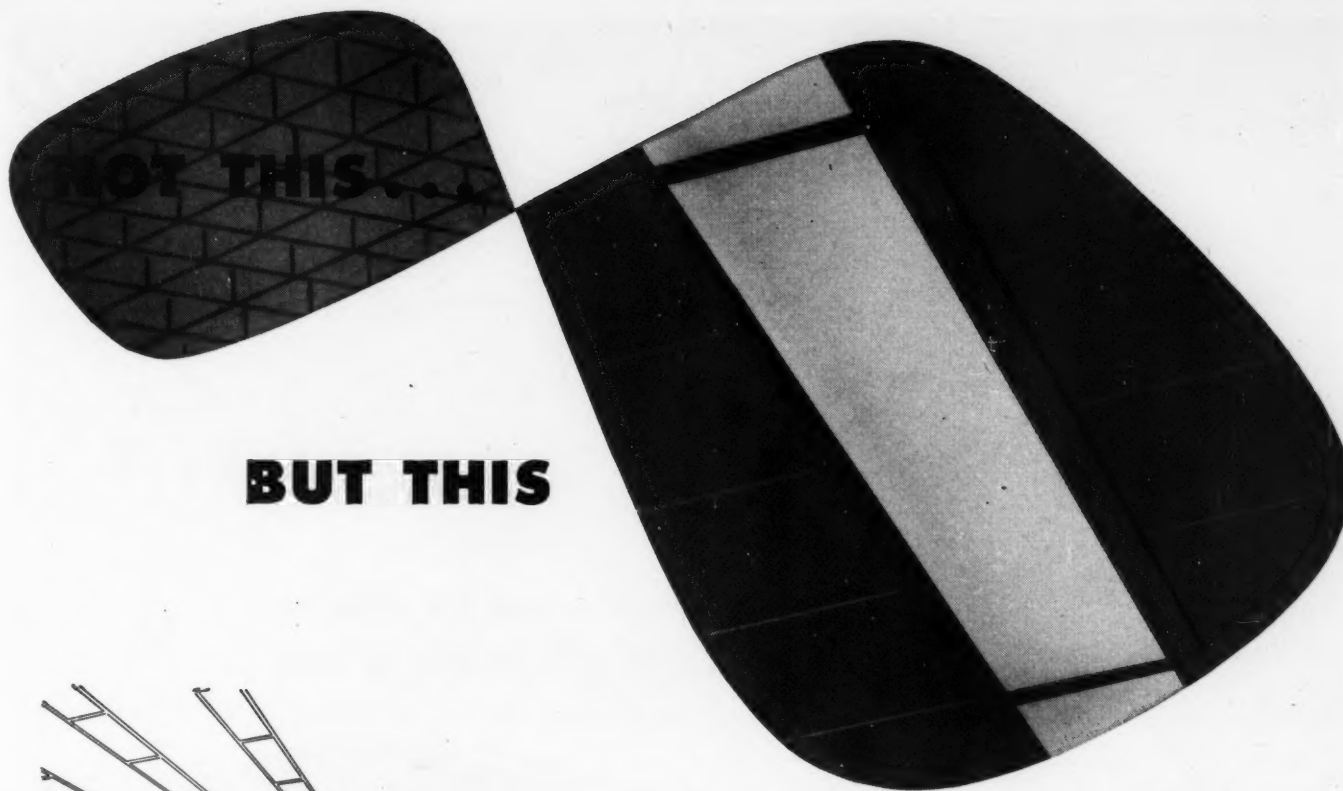
EQUIPMENT FOR THE PREPARATION AND SERVING OF FOOD

DIVISION OF THE EDWARDS MANUFACTURING CO.

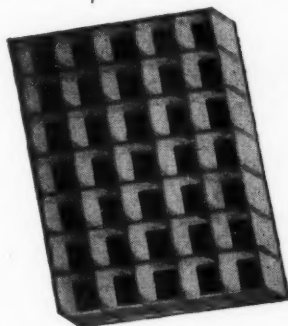
Branches in Principal Cities

429 CULVERT STREET

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BUT THIS



The tiny opal louvers are part of the glass itself—will not deteriorate with age or weathering—save metals—lower maintenance costs.

Corning's FOTA-LITE gives you louvered light without the "egg crate" effect

Dust-catching louvers reduce the efficiency and mar the beauty of louvered lighting installations, but with Corning's FOTA-LITE, there is no such problem. The louvers are actually part of the glass itself . . . presenting a smooth, flat surface that can be wiped clean quickly.

Thousands of tiny opal louver cells permanently embedded in its $\frac{1}{8}$ " thickness diffuse light evenly at normal viewing angles giving the glass the appearance of plain opal. Vertical light is practically unrestricted. Not color-selective, FOTA-LITE transmits the true color of the light source . . . gives unusual light quality.

FOTA-LITE is strong, light in weight, and free of warpage. It is ideal for enclosed fixtures, totally luminous ceilings . . . wherever louvered lighting *without bulk* is desired. Louvers in the standard product are accurately designed for 45° cut-off. For other applications, a wide variety of patterns can be produced in the glass.

FOTA-LITE is featured in ceiling installations and top quality luminaires by the leading manufacturers of lighting fixtures.

For complete information send for Bulletin LS-32 which describes FOTA-LITE.



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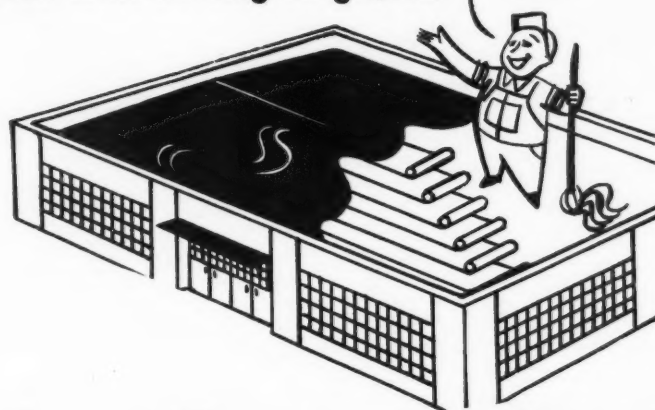
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"Wow! There's another
J-M Built-Up Roof"

"It gives
full protection
from fire, rot and
weather!"

"Right...and it's smooth-
surfaced with no slag or gravel!"



Yes—it's a Flexstone* Roof

Each ply is a flexible covering of stone!

The secret of a Johns-Manville Flexstone Built-Up Roof is in the *felts*. They're made of fireproof, rotproof, weatherproof, enduring *asbestos*.

Flexstone Built-Up Roofs won't dry out from the sun... need no periodic coating. They're *smooth-surfaced*, too—permit thorough drainage, make any damage easy to locate and repair. They are engineered to each job... applied only by *J-M Approved Roofers*. J-M Asbestos felts are perforated to make application easier, give a smoother job, conform better to roof decks.

For your added protection, the Johns-Manville Asbestile* System of Flashing insures proper treatment of all critical

areas. Asbestile is a heavy-bodied plastic cement designed for use with asbestos flashing felts to give thorough watertightness. As it sets, Asbestile becomes hard and forms an integral part of the wall itself.

To eliminate slag or gravel on dead-level or low-pitched roofs, Johns-Manville has developed a new smooth-surfaced asbestos roof called Flexstone *Special Built-Up Roof*.

Send for brochure BU-51A. Contains complete specifications for Flexstone Roofs and Asbestile Flashing System. Write Johns-Manville, Box 158, Dept. AR, New York 16, N. Y.



*Reg. U. S. Pat. Off.

Made of ASBESTOS

Johns-Manville **FLEXSTONE** Built-Up Roofs

ASBESTOS CORRUGATED TRANSITE* • ACOUSTICAL CEILINGS

DECORATIVE FLOORS • MOVABLE WALLS • ETC.



DURAPLASTIC* scores another touchdown in Texas stadium

THE REFEREE is W. F. Swigert of Swigert Construction Company, Waco, Texas, contractor for Baylor University's huge new stadium. His verdict: "We are well pleased with the performance of Duraplastic in any type of construction."

Mr. Swigert says his firm has used Atlas Duraplastic air-entraining portland cement for years because "Duraplastic-made concrete is more workable, and there is less segregation of aggregates."

Important points! Duraplastic also minimizes water-gain, generally improves surface appearance, fortifies the finished concrete against the effects of freezing-thawing weather . . . and in paving, resists the scaling action of de-icing salts.

YET DURAPLASTIC COSTS NO MORE

It sells at the same price as regular cement and requires no unusual changes in procedure. Complies with ASTM and Federal Specifications. For descriptive booklet, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Ave., New York 17, N.Y.



NOTE UNIFORM SURFACE appearance of concrete in close-up of this stadium job. With Duraplastic, less mixing water is needed for a given slump. The mix is more plastic and more uniform; aids proper placement.

OFFICES:

Albany, Birmingham, Boston, Chicago, Dayton, Kansas City, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Waco.

*"Duraplastic" is the registered trade mark of the air-entraining portland cement manufactured by Universal Atlas Cement Company



DURAPLASTIC

AIR-ENTRAINING PORTLAND CEMENT



Makes Better Concrete at No Extra Cost

"THE THEATRE GUILD ON THE AIR"—Sponsored by U. S. Steel Subsidiaries—Sunday Evenings—September to June

In N.B.C.'s newest TV studio it's AMPLEX SWIVELITES



Lighting layout designed by Messrs. S. Atwood and C.W. Bullock, N.B.C. . . . Swivelites supplied by Graybar Electric Company.

N.B.C. engineers in designing WNBT's latest TV studio for Dave Garroway's program, "Today", called for the last word in every telecasting detail . . . and that meant Amplex Swivelites for the all-important lighting effects. More than 200 Swivelites are employed. Besides the ceiling installation, other Swivelites are mounted on portable floor troughs for use as footlights.

Amplex Swivelites are today's first choice for effective and economical display lighting. Their special double-ball swivel provides positive, fingertip positioning. Cool, ventilated hoods prolong lamp life. Every Swivelite consists of a few basic units which are interchangeable with every other.

For top effectiveness, and to save time and costs in arranging new lighting effects, get the whole Amplex Swivelite story. Write Amplex Corporation, Dept. D-6, 111 Water St., Brooklyn 1, New York.



Sealed-Beam Reflector Lamps, Colorbeam Lamps, Spotlights and Floodlights, Industrial Infra-Red Heat Lamps, Vibration and Rough Service Lamps, Street Lighting Lamps, Traffic Signal Lamps, Incandescent Lamps, Fluorescent Tubes, Display Accessories.

Complete line of
Swivelites for all
highlighting
needs



C11SH



C12SH-12



Focalite B-5



Hi-Hat 711G

Architectural Engineering

PRODUCTS

(Continued from page 280)

Lewis & Conger Safety Awards Given to Seven Home Products

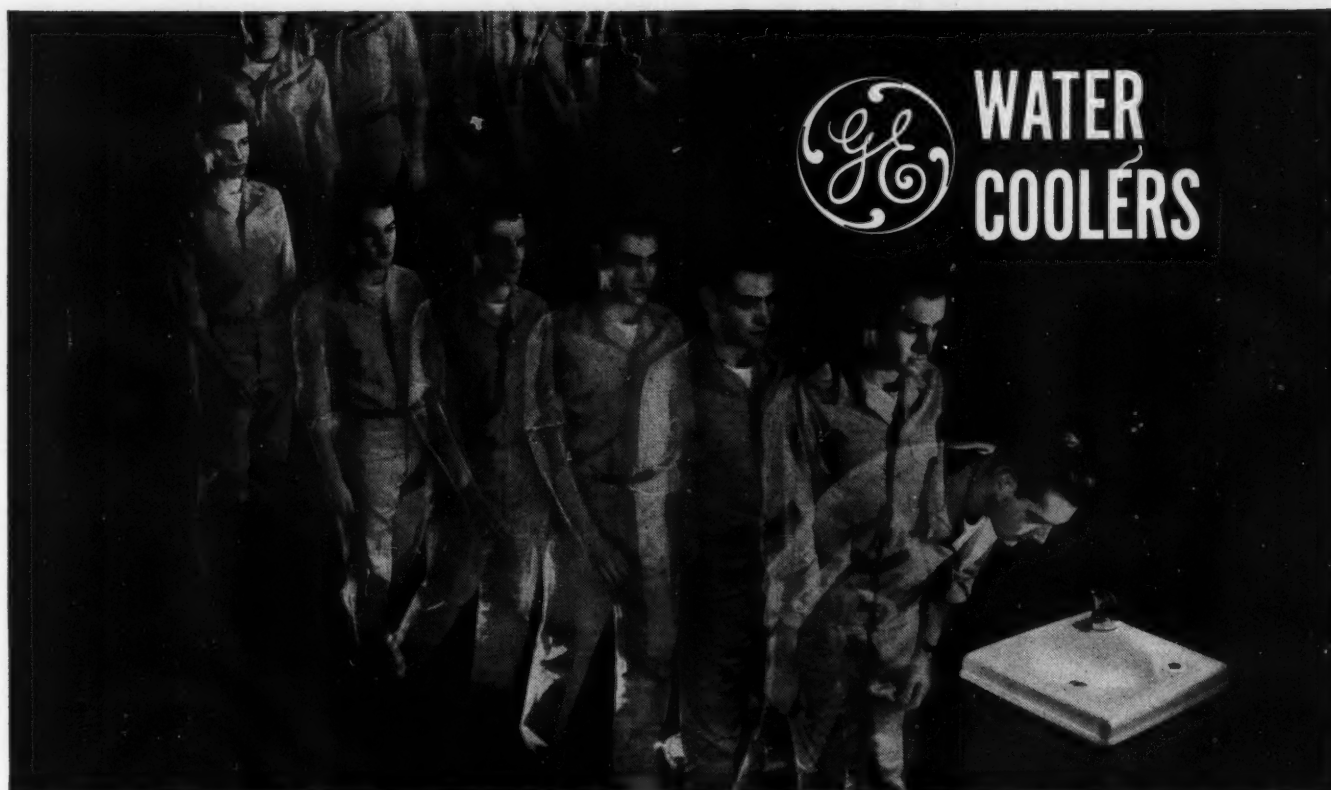
The *Red-I-Post*, an adjustable device to prevent sagging floors, due to overloading with heavy equipment, recently won an annual award for safety. Designed to sustain heavy loads of added kitchen utilities, weighty furniture such as pianos, etc., the post is claimed to support a load of over 32,000 lb. Easily erected, it consists of a steel tube in two sections, one sliding into the other — telescope fashion — allowing simple adjustment to the desired height. Available in five lengths to fit varying requirements, the post is manufactured by the Sawhill Mfg. Co.

Other award winning products included the *M-T Spout* steam iron, made by Casco Products Corp., which permits draining in tea kettle style after the water has cooled; the *E-Z Lift* pan and jar holder, manufactured by the Weaver Sales Co., a steel handle device designed to prevent burns; and a Christmas tree stand, *Forest Fresh*, which holds seven qt of water, enabling the tree to be kept moist at all times — a preventive of fire hazards. The three remaining awards were given to General Electric products, one of which won the grand award. Winner for the highest honor was the G. E. *Sleep-Guard* electric blanket, containing a new method of wiring which protects against overheating, and has an automatic control that shuts the current off if any part of the wire should become overheated. The other two G. E. products included an *All-Purpose* electric fan, shielded front and back with a mesh grille, and the *Monowatt Twin Night Lights*, designed to provide a dim light in dark passages, thereby eliminating accidents. Lewis & Conger, 45th St. on Ave. of Americas, New York, N. Y.

New Line of Oak Furniture

Fulbright Industries, of Fayetteville, Arkansas, has recently introduced some new *Ozark Inspired Furniture* designed

(Continued on page 288)

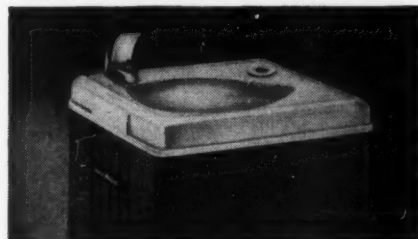


LONG WALKS TO DRINKING WATER can be surprisingly expensive when viewed in terms of all your employees over a full year.

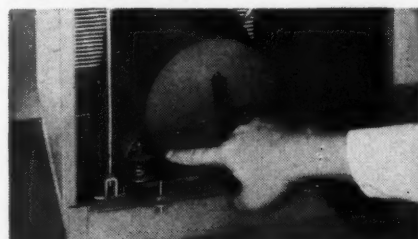
How much are these extra steps costing you?



FITS ALMOST ANYWHERE...all models take less space than an ordinary chair.



SANITARY TOP...lustrous, gleaming, easy to keep clean. Extra deep basin to prevent splashing.



SEALED G-E REFRIGERATION SYSTEM...Efficient, dependable. Covered by G-E 5-year protection plan.

A new way to cut wasted man-hours is offered in the
General Electric Work Center Plan for Water Cooler Placement.

How many feet does your average employee walk to get a drink of water? 50 feet? 100? 200? Unnecessary steps may prove more costly than the installation of additional water coolers.

With the new G-E Plan, you can now check your own drinking water facilities quickly and easily. You can see for yourself whether the purchase of one or

more water coolers for any work center can cut your overhead the easy way.

A free copy of the booklet, "G-E Work Center Plan for Water Cooler Placement," will be sent you on request. Fill out the coupon below for all the information you need to find the most economical plan for your business establishment.

You can put your confidence in—

GENERAL  ELECTRIC

FREE! Illustrated Booklet giving payroll savings table, 5 step method, and typical floor plan.

General Electric Company, Section AR-2
Air Conditioning Division, Bloomfield, New Jersey
I am interested in learning more about the G-E Work Center Plan.

NAME

COMPANY

ADDRESS

CITY..... ZONE..... STATE.....



What brings customers back again?

You know the answer. It's something "extra" at a fair price. In a store, shopping convenience may be the extra. Or, patrons may be drawn by simple things like friendliness and trusted good taste.

Customers for Otis escalators are the same way. Like shoppers in stores, they try to buy important things wisely, from sellers they trust. Certainly, vertical transportation is a major purchase. It can boost a store's sales. Yet mistakes may cut traffic capacity, and they're very costly to correct.

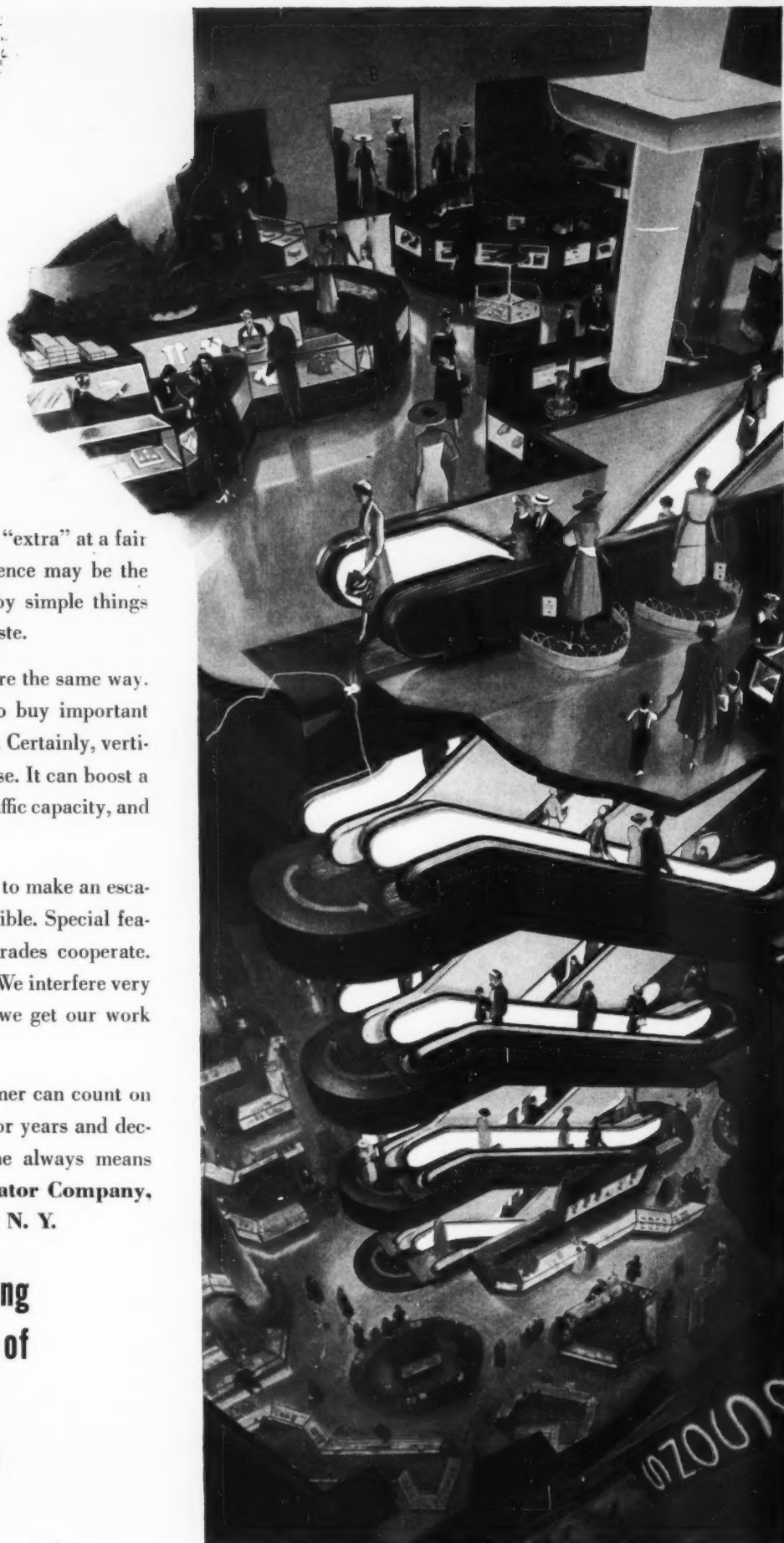
Otis has solved many problems to make an escalator installation as painless as possible. Special features help craftsmen of different trades cooperate. This cuts installation time and cost. We interfere very little with shopping activities, and we get our work done promptly.

Most important, an Otis customer can count on good performance, day after day, for years and decades. The responsibility we assume always means an extra value for you. **Otis Elevator Company, 260 11th Avenue, New York 1, N. Y.**

**Better elevating
is the business of**



Escalators • Passenger Elevators • Freight Elevators • Electric Dumbwaiters • Maintenance • Modernization

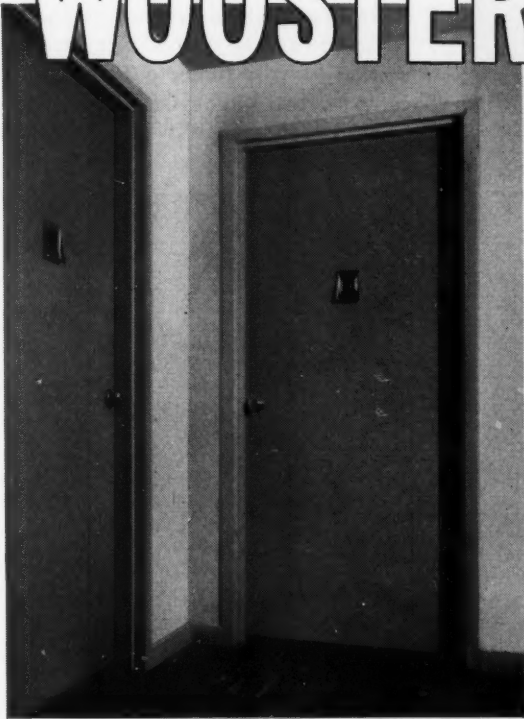


The Only Steel Door Line
that matches from Corridor to Closet

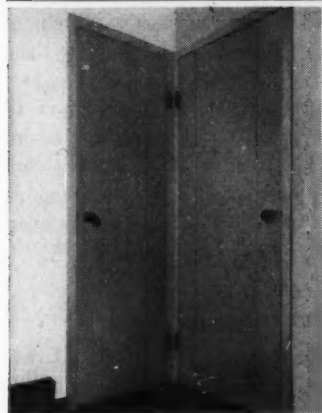
USF

Hollow Steel

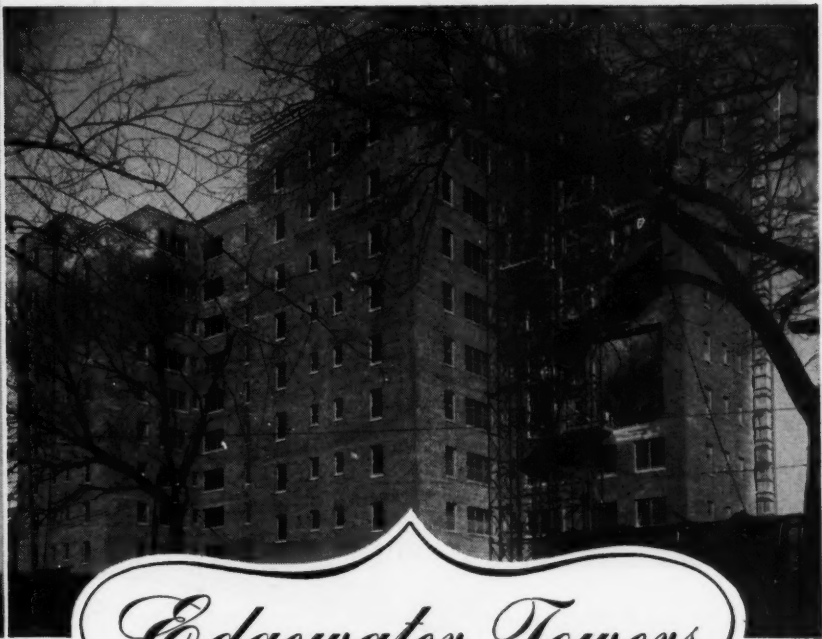
"WOOSTER" DOORS and Frames



Corridor Entrance
Doors with
Interviewer



Matching Closet and
Partition Doors

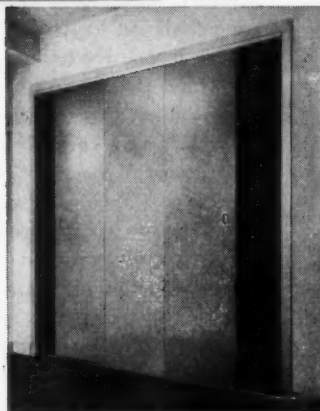


Edgewater Towers

LAKEWOOD, OHIO

Features the "WOOSTER" Door

Fine apartments for fine living like the new 205 unit Edgewater Towers are featuring USF Hollow Steel "Wooster" Doors and Frames. This 11-story building with penthouse features USF's insulated corridor doors with interviewer units, interior partition and closet doors, and double sliding closet doors and frames—all *matching!* As builders, The Byrne Organization recognizes the labor-saving installation advantages and as owners they will obtain the low-maintenance durability achieved with USF Hollow Steel Doors and Frames.

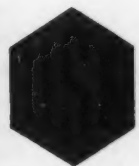


Double Sliding
Closet Doors that
Match

United Steel Fabricators INC.

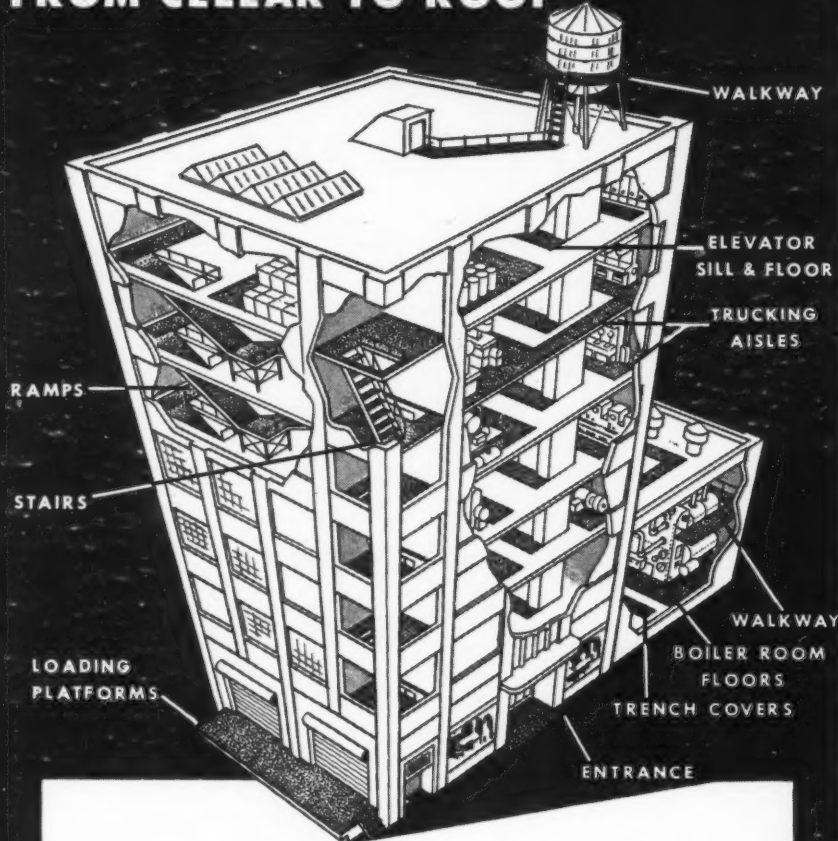
WOOSTER, OHIO

Manufacturers of: Hollow Metal Doors and Frames • Prefabricated Metal Buildings • Corrugated Metal Window Wells • Highway Guard Rail • Structural Plate Bridge Flooring • Corrugated Metal Pipe



BLUEPRINT FOR SAFETY...

A.W. ALGRIP ABRASIVE FLOOR PLATE FROM CELLAR TO ROOF



More and more, accident prevention is becoming the architect's business. That's why you'll find A.W. ALGRIP Abrasive Rolled Steel Floor Plate specified for so many industrial and commercial structures. For this tough, anti-slip flooring adapts to thousands of applications, simplifies architectural design, and gives lasting protection against dangerous slipping accidents. Get the facts about ALGRIP—before a client asks you, "What about foot-safety?" We'll be glad to send you our free, fact-filled, 8-page Booklet A-20.



THERE'S NEVER A SLIP ON A.W. ALGRIP

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE ALAN WOOD STEEL COMPANY

CONSHOHOCKEN, PA.

Over 125 years of Iron and Steel making experience

Gentlemen: Please send me your free, 8-page ALGRIP Booklet A-20.

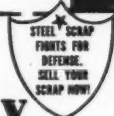
Name _____

Company _____

Address _____

City _____ Zone _____ State _____

Other Products: PERMACLAD Stainless Clad Steel • A.W. SUPER-DIAMOND Floor Plate • Plates • Sheets • Strip • (Alloy and Special Grades)



Architectural Engineering

PRODUCTS

(Continued from page 284)

by architect Edward D. Stone. Constructed of solid oak, the various items are available in an all-natural finish, a black lacquered finish, or a combination of the two. The pieces include three seating units, three different sized cabinets, two dining tables, five occasional tables, a 62-in. bench, a contour



Table and chairs combine natural wood and black lacquer finishes. Storage unit has oak strip door panels

chaise and a small stool. Cabinets may be ordered with inset door panels of either cane or handwoven oak wythes, and all door pulls are genuine leather. Several of the tables are designed to double as seating pieces—the 62-in. bench serving as an effective cocktail table, and other low tables serving as auxiliary seats. Waldron Associates, 1230 Second Ave., New York, N. Y.

Hand-Screened Wallpaper

Introduced at the recent A.I.D. exhibit in New York City, five new hand-screened wallpapers are now available, each designed to tie in with the current trends in color schemes and fabric and furniture patterns. Three of the new papers effect a three-dimensional feeling. In this group are *Primrose*, a floral pattern available in three color combinations; *Caprice*, a textured paper and a companion to *Primrose*; and *Plantation*, a nature-inspired semi-tropical design, available in four color combinations. The other two patterns in the new collection are *Empire Wreath*, a design borrowed from the Napoleonic

(Continued on page 292)

ARMORPLY® revolutionary panels

for curtain wall construction

You'll like the advantages the new Armorply Building Panel offers in curtain wall construction.

First of all, you will be amazed by its extreme flatness. You'll like Armorply's space-saving features. You'll like its variety of beautiful colors and surface finishes...its variety of core material...its wide range of insulating characteristics.

And you'll like its ease in handling...its low installation cost...its savings in maintenance.

Armorply Building Panels save space. Being only 2 to 3 inches thick they take the place of a masonry wall 12 to 15 inches thick.

These metal-faced panels can be of porcelain-enameled steel, aluminum, plain steel or stainless steel. They can be ordered in colors to meet specifications.

They can be of Honeycomb core construction (Armorply Honeycomb) or made with incombustible, mineral-type cores.

They are available in any size up to 5 by 10 feet, or even longer if necessary. They require no trimming or cutting on the job. They drop into place for quick, easy erection.

And because they provide both an exterior and interior finished surface they require no painting or other decoration.

Remember, these Armorply Building Panels are always *made to order*. You get a panel, engineered to meet your customer's requirement on a particular job...every time.

Get the complete information. Send this coupon today.

United States Plywood Corporation

Largest Plywood Organization in the World

Manufacturers and Distributors of Weldwood® Plywood,
Weldwood Doors and other Wood Specialties.



United States Plywood Corporation

55 West 44th Street, New York 36, N. Y.

AR-6-52

Please send descriptive A. I. A. file material on Armorply Building Panels.

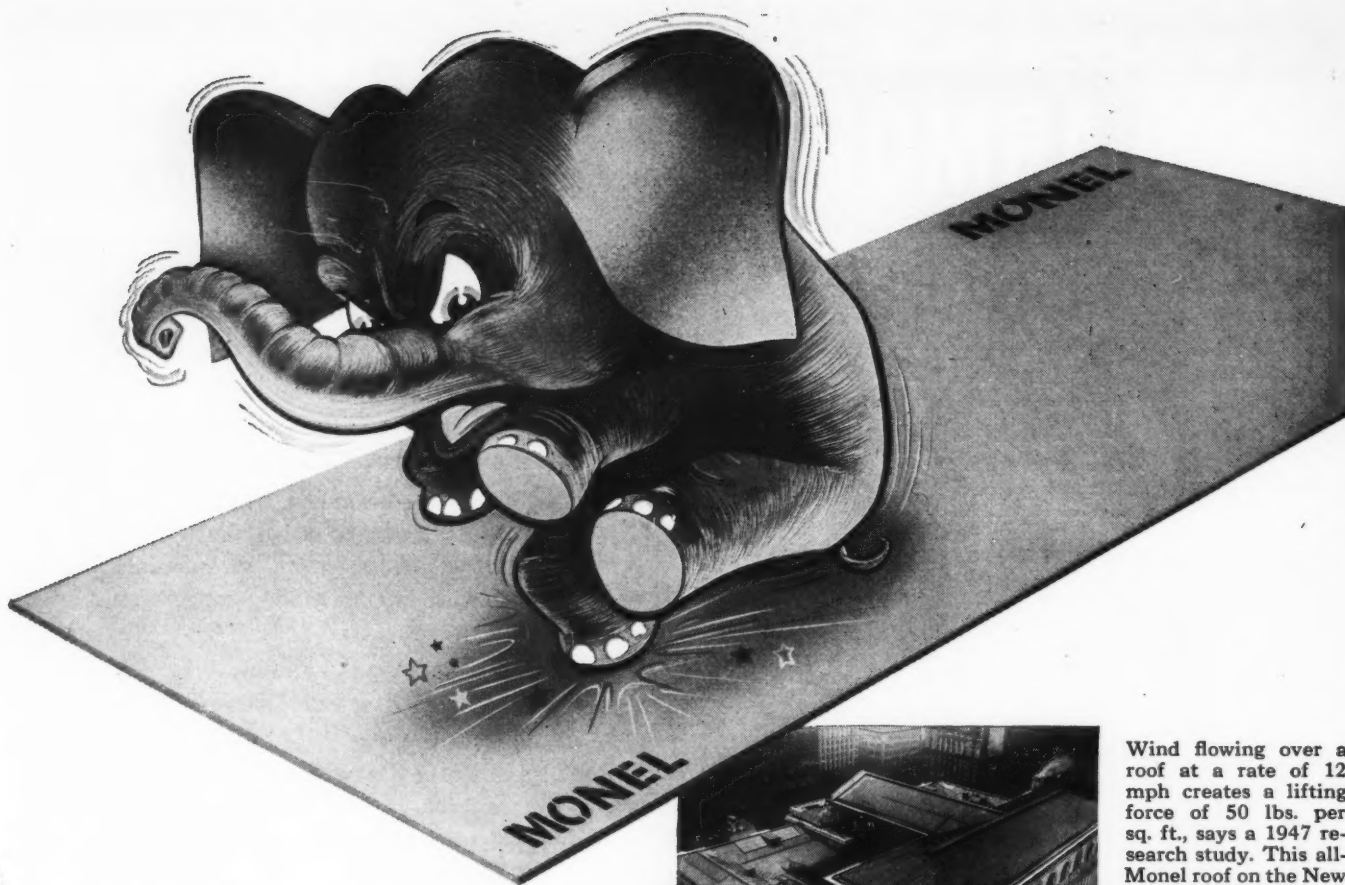
Name.....

Company.....

Address.....

City.....Zone.....State.....

See our exhibit in
Booth No. 7
American Institute of
Architects Convention
Waldorf-Astoria Hotel,
New York, N. Y.
June 24-27



A roofing sheet to remember—

...it's rigid
...it's strong
and tough!

When a Monel® roof goes up, it doesn't matter much what comes down on it.

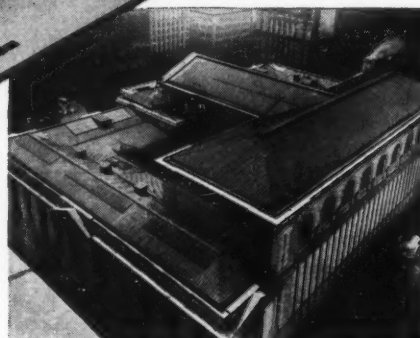
For Monel is just about as rugged as a roofing metal can be.

Two-thirds nickel and one-third copper, Monel provides greater rigidity than other commonly-used materials.

What's more, it is stronger and tougher than structural steel. (And non-rusting, besides!) It withstands damage and deformation during installation...and impact, abrasion and flexure *after* installation.

Right now—because the defense program calls for so much nickel—Government orders prohibit the use of Monel for building applications.

But the time will come again when there is enough Monel available to meet normal roofing needs! Meanwhile, INCO can help you in planning for the future. Call on our Architectural Section for the latest technical information and literature. There's no obligation, of course.



Wind flowing over a roof at a rate of 12 mph creates a lifting force of 50 lbs. per sq. ft., says a 1947 research study. This all-Monel roof on the New York Public Library has withstood every wind that tore over the city since 1936. Some parts of the roof date back to 1928, when the first test section was installed.

MONEL

...“for the life of the building”



THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street, New York 5, N. Y.

NATCO STRUCTURAL CLAY TILE

for Exterior and Interior Walls in the Modern Factory

Such exterior walls, when lined with Natco-Ceramic Glazed Vitritile, **also non-critical**, represent the best in masonry construction. These interior walls and partitions of Natco Vitritile set up sturdy and strong are attractive and cheerful, and require little or no maintenance other than an occasional cleaning with soap and water. The finishes and colors available with Natco Ceramic Glazed Vitritile have been scientifically selected and developed to provide a **permanent** structural wall and a **permanent** attractive functional finish in one operation.

Immediately available, when you specify and use Natco Structural Clay Tile, you are free from costly, time-wasting delays. Send now for your copy of Faber Birren's Book entitled "The Scientific Approach to Color Specification." It is yours for the asking.

Exterior walls of non-critical Natco Manganese Spot Dri-Speedwall Tile or Natco Tex Dri-Wall Tile are strong and enduring, are load-bearing, architecturally attractive and resist moisture penetration. In addition, they are fire, termite and vermin proof, cannot rot or decay, are free from shrinking and cracking and require no painting or repairs.



NATIONAL FIREPROOFING CORPORATION

GENERAL OFFICES: 327 FIFTH AVENUE • PITTSBURGH 22, PA.

Branches: New York • Syracuse • Detroit • North Birmingham, Alabama
Chicago • Philadelphia • Boston • Toronto 1, Canada

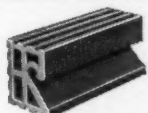
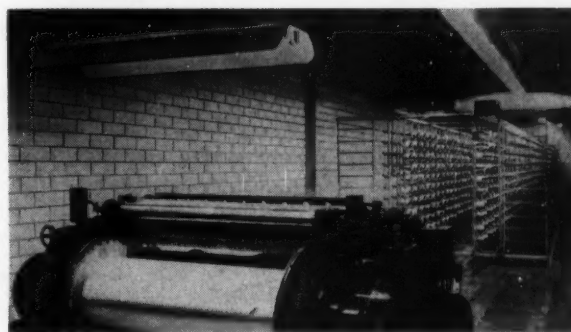
"The Quality Line Since 1889"



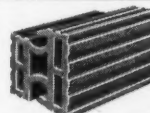
Exterior and interior views of Greenwood Textile Mills, Cothron, S. C. Engineers — McPherson Company, Greenville, S. C. Exterior walls of Natco Mingled Shades, Tex Dri-Wall Tile lined with Natco Ceramic Glazed Vitritile.



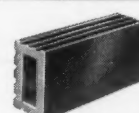
Exterior and interior views of Schneider Textile Mills, Taylorsville, North Carolina. Engineers — Biberstein & Bowles, Charlotte, N. C.; General Contractor — Luke Gwaltney, Taylorsville, N. C. Exterior walls of Natco Manganese Spot Dri-Speedwall Tile lined with Natco Ceramic Glazed Vitritile.



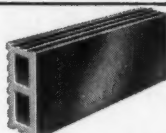
Raggle Blocks
Prevent Water Seepage
4" x 5 1/2" x 12" Nom. Size



Speed-A-Backer Tile for
Backing Brick Faced Walls
12" long Varying Heights



Ceramic, Clear
Glazed Vitritile 5 1/2" x 12"
Nom. Face Size



Ceramic Glazed Vitritile
8" x 16" Nom. Face Size

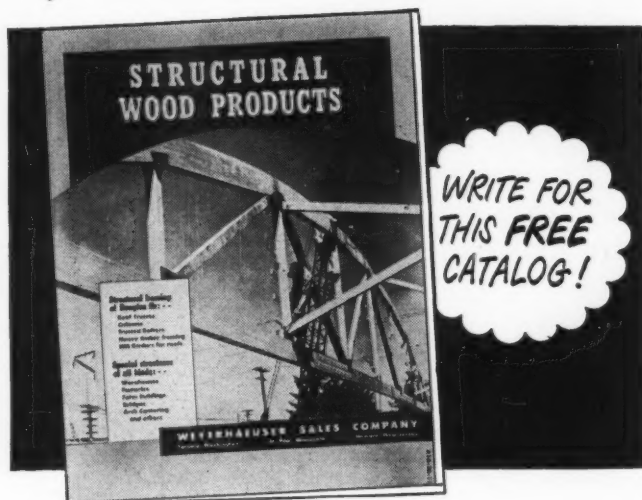


Non-Loadbearing Tile, Scored
and Unscored, 12" x 12" Face
In Standard Wall Thicknesses



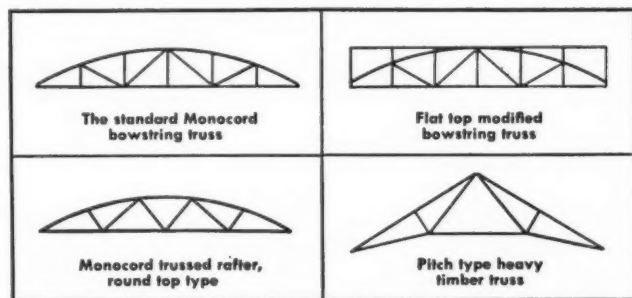
Buff Unglazed, Manganese
Spot, Salt Glazed, Red
Textured Dri-Speedwall Tile,
5 1/2" x 12" Nom. Face Size

Structural Wood Framing Systems by Weyerhaeuser



● This book illustrates and describes structural wood products that are precision-fabricated by Weyerhaeuser. It features a variety of types of roof trusses: bowstring, flat top, tandem, and pitched, for post-free, clear-span buildings, 30 feet and wider . . . round top and pitched type trussed rafters . . . segmental arched rafters for 30 to 50 foot spans . . . buttressed arches for 50 to 100 foot spans . . . girders and other wood structural systems.

These products are fabricated from stress graded Douglas Fir lumber and delivered to the job site complete with hardware, ready for erection by local crews. The catalog includes pertinent engineering and design data. Write our nearest office for the catalog and other information.



WEYERHAEUSER
SALES COMPANY

FABRICATION DEPARTMENT
SAINT PAUL 1, MINNESOTA
TACOMA, WASH. NEWARK, N. J.

Architectural Engineering

PRODUCTS

(Continued from page 288)

era, simple, yet regal in appearance; and *Bouquet*, a clear, uncluttered floral pattern, featuring lilies of the valley against soft pastel color backgrounds. Richard E. Thibaut, 44 East 53rd St., New York, N. Y.

New Seating Unit

A recent addition to the furniture market is the new *Robin Day* occasional chair. Constructed of welded steel tubing with a mat black plastic finish, the chair has a natural birch back and a rubber



Occasional chair has tubular steel frame and may be easily stacked

woven plastic seat that is available in a variety of colors. One of the features of the new design is that it has been built for stacking. The English designer, whose name the chair bears, collaborated in a first prize design for storage units at Museum of Modern Art three years ago. J. G. Furniture Company, 543 Madison Ave., New York, N. Y.

Kitchen Appliances

Along with a wide selection of gas and electric ranges, cabinet-sink combinations and base and wall cabinets, a completely automatic *Double-Oven Electric Range* has recently been devised.

(Continued on page 296)



Architects: SMITH, HINCHMAN AND GRYLLS, INC. Licensed Installer: CENTRAL ELECTRIC MOTOR AND CONSTRUCTION COMPANY Licensed Agent: GRAYBAR ELECTRIC COMPANY

The most important thing that happens in this room is . . . **SEEING**

Here in this room executives and engineers of a leading auto maker meet to examine new car models. Above them is a Wakefield Ceiling giving such nearly perfect light that it is possible to see every line and shape and color *exactly as it is*.

This is because the light (from concealed fluorescent lamps) is diffused through a corrugated Plexiglas "ceiling" to distribute evenly over all parts of the room, without glare, shadows or sharp brightness contrasts. The illuminating engineer's ideal 3 to 1 to 1/3 brightness ratios are well maintained.

The Wakefield Ceiling shown here, incor-

porating sound-absorbing baffles, spotlights and sprinkler heads, was built as a complete "package" at the Wakefield plant, to architects' specifications, and installed in its entirety by a Wakefield-licensed electrical contractor. Area—1,005 square feet; Foot-candles—50; Lamps—T-12 430 M.A.; Lamp spacing—36".

Whenever you have a vital seeing-hearing problem to solve, you will want to consider the Wakefield Ceiling. We have prepared a comprehensive booklet, a copy of which you may have by writing to The F. W. Wakefield Brass Company, Vermilion, Ohio.



Wakefield Over-ALL Lighting



THE GRENADE



THE PACEMAKER



THE COMMODORE




THE STAR



THE WAKEFIELD CEILING





Five ways to pick the right architectural magazine for your building product advertising

1 COMPARE CIRCULATION:

Architectural Record reaches more architects and engineers than any other magazine in its field. Market-wise, the Record's subscribers *verifiably* design—and specify the products that go into—83% of the dollar volume of all architect-engineer designed buildings.

2 COMPARE EDITORIAL CONTENT:

Architectural Record is the one magazine edited specifically for architects and engineers. And every issue of the Record covers the *full range* of the active architect's and engineer's design interest in a wide variety of building types, both non-residential and residential. Furthermore, Architectural Record is the one magazine whose editorial emphasis on individual *types* of buildings is adjusted continuously to the rate at which these buildings are being planned by architects and engineers as shown by *Dodge Reports*.

3 COMPARE READERSHIP:

Architects and engineers have voted Architectural Record their preferred magazine in 35 out of 41 reader preference studies *sponsored by building product manufacturers and agencies*.

4 COMPARE COSTS:

Architectural Record offers you concentrated coverage of the largest architect and engineer audience *at the very lowest cost per page per thousand*.

5 COMPARE ADVERTISING VOLUME:

Year after year (and again in 1952) more building product manufacturers buy more pages of advertising in Architectural Record than in any other architectural magazine. That is a convincing testimonial to the proven advertising effectiveness of the Record.

All five basic points of magazine comparison point to Architectural Record as the *right* architectural magazine for your building product advertising.

Industrial building for the Electrolux Corporation first presented to architects and engineers in Architectural Record.
Architects: Raymond and Rado
Photographer: Joseph W. Molitor

Architectural Record

"Workbook of the
active architect
and engineer"

F.W. DODGE



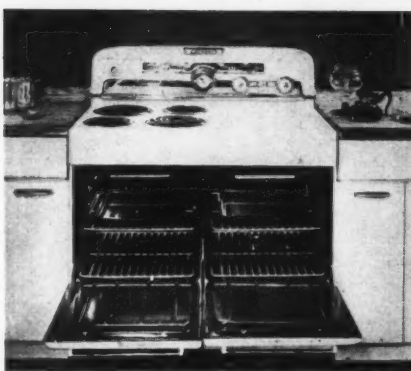
119 West 40th St.
New York 18, N. Y.
LOngacre 3-0700



PRODUCTS

(Continued from page 292)

The new 40-in. model (EB-76) features a color push-button panel for fingertip control of all four of its surface cooking units and contains two good sized ovens, each with a 3000 watt broiling unit, a 2200 watt baking unit and a 200 watt top unit for even baking and browning. A built-in full fluorescent lamp is installed on the backguard of



Double-oven electric range provides ample space for baking and broiling

the range, each oven is equipped with an automatic preheat thermostat, and other special features include a clock with an automatic timer for oven and one appliance outlet, indicator lights for surface units and a 60-min interval timer with a bell signal. Murray Corporation of America, Home Appliance Div., Scranton, Pa.

New Television Line Introduced

Featured in the 1952 *Philco Line* are 28 new TV receiver models, which reportedly show marked advancement in quality, power, engineering, convenience, cabinet styling and production. Among the models introduced are 17-in. and 20-in. table and console sets and two new 16-in. table models, all featuring the famous "balanced beam" picture. All models have been engineered so that by the use of an adapter they can receive all future UHR telecasts, the Columbia color signals in black and white and can also easily use a color converter. Some of the sets may be obtained with remote control attachments, and either swirled mahogany (some with top grain leather tops), American walnut or blond oak finishes are available. Conveniences such as illuminated channel selectors and built-in casters for easy moving and correct angle viewing are also provided. The new Colorado tuner and exclusive duplex chassis with double action synchronizing circuit is claimed to give better reception in fringe areas. Philco Corporation, Tioga & C sts., Philadelphia, Pa.

Fibrous Roof Plank

Tectum is a new structural building material reported to be incombustible and to furnish high insulating and sound-absorbing values to buildings where it is installed. Composed of long wood fibres bonded together with a thermal-setting inorganic cement into large planks, the material can be sawed and worked with ordinary hand tools. The long sides of the planks are tongue-and-grooved for easy fitting.

The plank is said to have sufficient strength to carry normal roof loads on spans up to 5 ft with a safety factor of 4. Its high insulating value is reported to eliminate the need for additional insulation and the exposed underside is said

(Continued on page 300)

LONG LIFE makes DURIRON THE BEST BUY IN ACIDPROOF PIPE



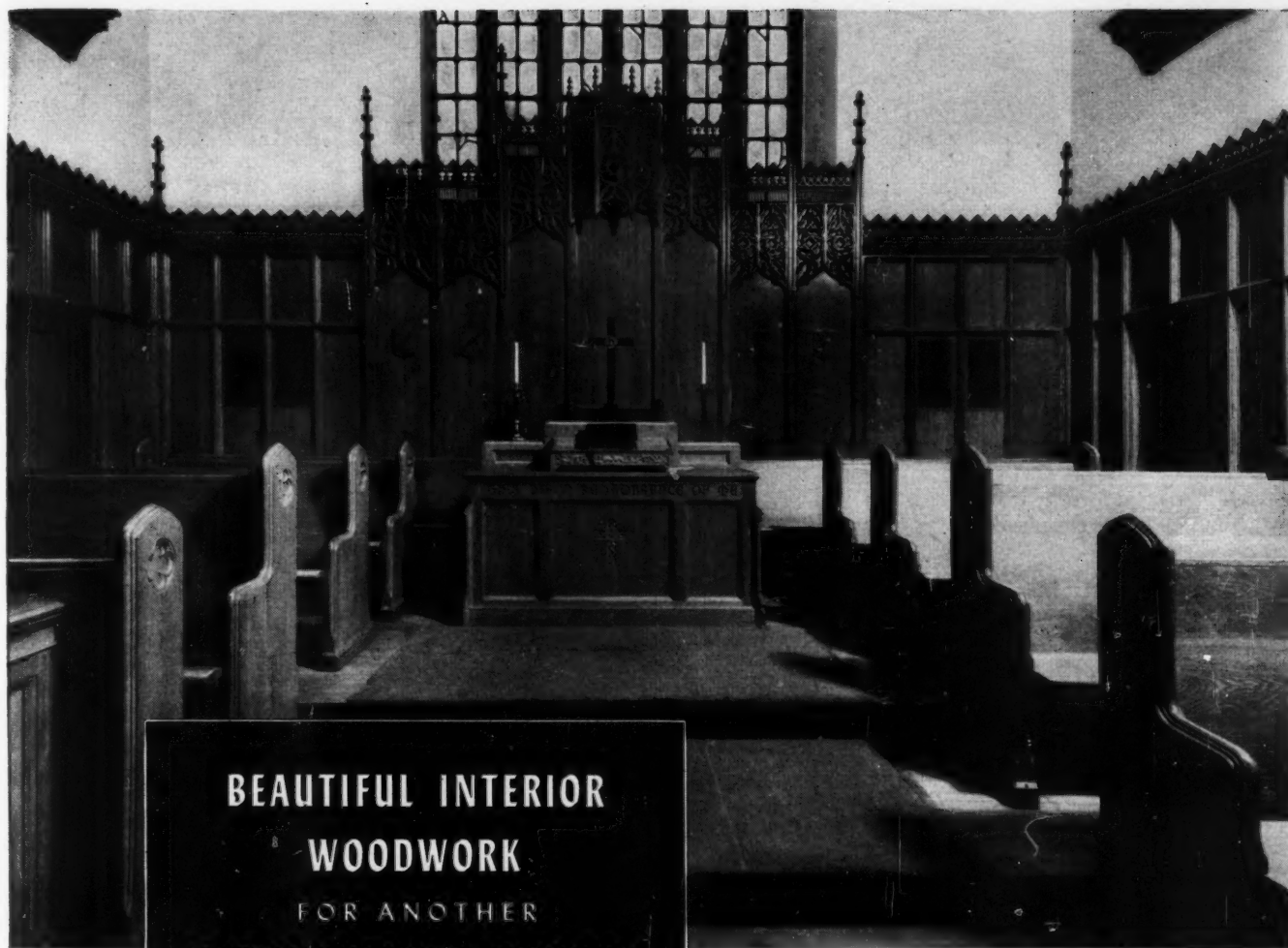
Duriron resists practically every industrial corrosive in use today. *This resistance is as thick as the pipe wall.* This means no leakage or costly replacement caused by corrosion damage.

The labor cost of installing Duriron is the same as that for other types of pipe—and it's a cost that will never occur again.

Physical properties and other details about Duriron Acidproof Pipe are available in free catalog PF/1. Write.

THE DURIRON COMPANY, Inc.
405 NORTH FINDLAY STREET
DAYTON 1, OHIO





**BEAUTIFUL INTERIOR
WOODWORK
FOR ANOTHER
DISTINGUISHED CHURCH**

Chancel, First Presbyterian Church, Wilmette, Illinois,
Architect, Stanley M. Peterson.

Built, Finished and Installed By ONE Group of Craftsmen

Effective blending of traditional Gothic design and the beauty of fine architectural woodwork gives the chancel of the First Presbyterian Church of Wilmette an atmosphere of divinity that inspires a mood of reverence in every visitor. The reredos and paneling are of fine mission oak, constructed and finished precisely to the architect's specifications by the craftsmen of Woodwork Corporation. The completed work was installed in the church by Woodwork Corporation installation experts.

The skill of Woodwork Corporation craftsmen, the Woodwork policy of adhering pre-

cisely to the architect's specifications, and the completely coordinated construction-finishing-installing service which Woodwork Corporation provides are your guarantee of complete satisfaction. Woodwork's one-group control eliminates errors and delays and guarantees completion of the work on schedule with efficiency and economy. However large or small your custom woodwork plans, it will pay you to get an estimate from Woodwork Corporation.

WRITE FOR ILLUSTRATED FOLDER
describing Woodwork Corporation services



SEND US YOUR PLANS AND SPECIFICATIONS FOR PRICING . . . or
ask for further information on Woodwork Corporation services.



WOODWORK CORPORATION OF AMERICA

1427 WEST TWENTY FIRST STREET, CHICAGO 8, ILLINOIS

Serving Architects, Designers and Contractors For Nearly Half a Century

Advertisements like this in
leading trade publications are
telling dealers how
manufacturers are helping
them make more sales.

See these ads in:

American Artisan
American Lumberman
American Paint & Oil Dealer
Building Supply News
Contractors' Electrical Equipment
Electrical Merchandising
Flooring
Hardware Age
National Furniture Review
Plumbing & Heating Business
Qualified Contractor

Send samples of your current literature to Mr. T. O. Morgan, General Manager, Home Owners' Catalogs. He'll be glad to advise you about its most effective use in Home Owners' Catalogs. No obligation.

Hand-Picked Prospects for You

MR. DEALER!



Day after day, the people in your territory who are going to build their own new homes are located by the world's largest construction news gathering organization.

Then . . . a book of catalogs, illustrating and describing the varied products needed for new homes, is mailed to these prospects of yours. This book—Home Owners' Catalogs—is used and kept while these prospects are planning what they will want to buy for their new homes. It is important to you that the products you stock, show and sell are completely described to these buyers *before* they make their final decisions.



That is why so many leading manufacturers of the products that are bought for new homes distribute their consumer catalogs in Home Owners' Catalogs. These companies *know* that this is the way to do a thorough pre-selling job for you. They *know* these people are prospects for you because home-planners *must* buy the kind of things you sell.

Whatever you sell you can get the names and addresses of hand-picked prospects in your territory.

MAIL COUPON TODAY

Tell us how I can get the names and addresses of prospects for new home products . . . in my territory. (Available in local marketing areas within 57 eastern states only).

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

HOME OWNERS' CATALOGS

119 West 40th St., New York 18, N. Y.

This new Home Owners' Catalogs program is stimulating wide dealer interest . . . doing an effective merchandising job for many leading manufacturers who use Home Owners' Catalogs service to deliver their catalogs to these hand-picked prospects.

These leading manufacturers recognize the importance of families who are planning to build new homes in which they will live . . . know they strongly influence and many times make the actual decision as to what will be bought.

The catalogs of these manufacturers who use Home Owners' Catalogs service will be on hand to represent them when these buying decisions are being made. Your catalog can be there too!

HOME OWNERS' CATALOGS

Dept. AR, 119 West 40th Street, New York 18, N. Y.

Pennsylvania State Museum

Capitol Hill, Harrisburg, Pa.



ANOTHER CASE OF

Copper

WHERE IT COUNTS

Flying over the various State Buildings on Capitol Hill in Harrisburg, Pa., not only is a scenic thrill, but you also are amazed at the acres and acres of copper covering the roofs of the various buildings. One of the newest is the Revere Copper Batten Seam and Flat Deck Roof on the Pennsylvania State Museum Building.

This roof replaced one of rustable material. As is so often the case, when architects and builders want a metal with outstanding endurance qualities and low on maintenance, they invariably pick copper. Contractors like copper because it is so readily worked and soldered. And when installed as recommended in Revere's booklet, "Copper and Common Sense," as it was in this case, not only is customer satisfaction assured, but the prestige and reputation of all concerned are protected.

This installation was made prior to the copper shortage. While copper is not now permitted for roofs, we cite this installation as a means of reminding you of the merits of Revere Copper so that when it once more is permitted for roofing you will again use it. Meantime remember, while limited, you can still get Revere Sheet, Strip and Roll Copper for flashing.

For through-wall applications ask the Revere Distributor about Revere Keystone Thru-Wall Flashing.* He also will advise you of the availability of materials and put you in touch with Revere's Technical Advisory Service in the event you wish to discuss your technical problems.

*Patented



(Top Inset) A section of the Revere Copper flat deck and batten seam roof. Revere Copper was also used for flashing. A total of some 30,000 lbs. was used on the project. Roofing and sheet metal contractor was LeRoy Roofing Company, Harrisburg, Pa.

(Bottom Inset) Putting one of the 16 oz., 24" x 96" Revere Copper Cold Rolled Sheets in place on the batten seam section of roof. Note that short lengths were used in accordance with best installation practices as recommended in Revere's Booklet, "Copper and Common Sense." The use of short lengths prevents buckling and cracking which would result should sheets be too long. For the flat seam roofing, 20 oz., 16" x 18" Revere Cold Rolled Copper was used.

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

230 Park Avenue, New York 17, N. Y.

Mills: Baltimore, Md.; Chicago and Clinton, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y.—Sales Offices in Principal Cities, Distributors Everywhere

SEE REVERE'S "MEET THE PRESS" ON NBC TELEVISION EVERY SUNDAY

PRODUCTS

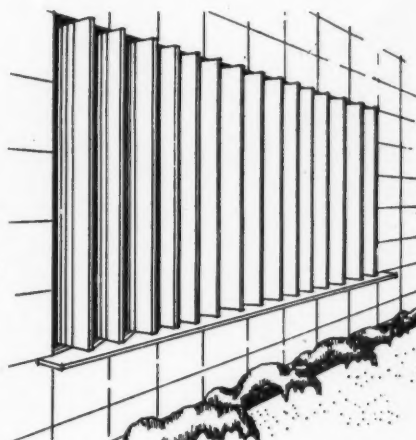
(Continued from page 296)

to be equivalent to the best acoustical ceiling for sound absorption. Three-in. plank has a noise reduction coefficient of 0.85 and the 2-in. plank has a coefficient of 0.75. When joints are stripped with saturated fabric, the plank can be laid in inclement weather without work stoppage. Tectum Corp., 105 South Sixth St., Newark, Ohio.

Porcelain Enamel Louvers

Reported to offer high reflectivity of indirect lighting, *Seaporcel* louvers of enamel fused to steel at 1550 deg. F are also said to be adaptable to numerous designs and dimensions. Finished in a wide variety of colors and textures, the louvers carry a 10-year guarantee against deterioration of surface or color. Installation is described as simple and low in cost, and maintenance costs are said to be practically nil. Seaporcel Metals, Inc., 2800 Borden Ave., Long Island City, N. Y.

Louvers have porcelain enamel finish, feature high reflectivity of indirect light



IF YOU'RE DRAWING PLANS FOR A BANK



PHOTO COURTESY MERCHANTS NATIONAL BANK, MANCHESTER, N. H.

—or a savings and loan association, whether a main office building or a branch, you will serve your client well by recommending an inviting, convenient Safe Deposit Department, with plenty of room for future as well as present requirements.

Today, more people than ever have more papers than ever that need the protection against fire, against burglary, against explosion, that only a safe deposit vault can give. As a means of attracting new customers and holding old ones, no other investment that a bank or savings and loan association can make will pay better dividends.

May we help you in your planning? The services of an H.H.M. representative, who is a specialist in this field, are at your disposal—with no obligation on your part.



Herring-Hall-Marvin Safe Co.

Main Offices and Factory in Hamilton, Ohio
Sales and Service Representatives in All Principal Cities.

Plastic Air Filter

A washable, plastic air filter for forced draft hot air furnaces and air conditioning systems is a new *Goodyear* development. A self-charging electrostatic unit, the filter utilizes thin polyethylene film, shredded into a porous mass. The electrostatic charge picked up from passage of air through the film reportedly attracts and retains the finest of dust, soot or smoke particles that may be suspended in the air. According to the manufacturer, laboratory tests have demonstrated that the new type filters are from two to four times as efficient as oil-coated filters and others which collect dust particles on their surfaces by impingement. An economical advantage is also afforded by the plastic filter, which reportedly can be cleaned easily by rinsing in cold water. No detergent is required, and, after the rinsing, the filter can be drained for several minutes and then restored to service while still damp. It can be cleaned repeatedly without loss in performance. Test installations in homes, stores and offices are said to have proved the efficiency of the unit. Goodyear Tire & Rubber Co., 1144 E. Market St., Akron 16, Ohio.

Occasional Tables

Several shapes and sizes of table tops are being introduced into the new *Dennett-Barker* line of occasional tables. Using natural blue slate from New England and warm colored shellstone from Texas, interesting textural effects are realized. An added feature in the use of this natural material is that it is claimed to be unharmed by liquid spill-

(Continued on page 302)

Beauty, too, is guaranteed in **PAINE REZO DOORS**

T. M. REGISTERED



Under the trained eye of long experienced craftsmen, veneers for faces are carefully selected, matched and marked to achieve a blended harmony of color and grain. The rich, distinctive appearance of Paine Rezo doors is there by design — not by chance.

In grain-matched faces you'll find another plus value that helps you to identify the best from the rest

You never have to apologize for the appearance of Paine Rezo doors, never have to take an "I'm-sorry-but-that's-the-way-they-come" attitude toward chagrined clients who are "stuck" with disfigured faces.

In Paine Rezo doors you'll find expertly matched face veneers carefully selected and blended so that they complement good interior effects. This painstaking work requires extra time, but it helps make Paine Rezo the extra good door that it is. From the special Rezo ventilated air cell all wood core to the beautifully

finished faces, you'll find Paine standards of craftsmanship the highest in the door industry.

That's why over 5,000,000 of these best-engineered doors have been installed in buildings of every type from coast to coast. They are made and unconditionally guaranteed to deliver satisfactory service by the world's largest exclusive producer of flush-type doors. In every way you'll find Paine Rezo a premium door in everything but price. See SWEET'S FILE — or write today for full information.

Manufactured by the

PAINE LUMBER CO., LTD. *Oshkosh Wisconsin*

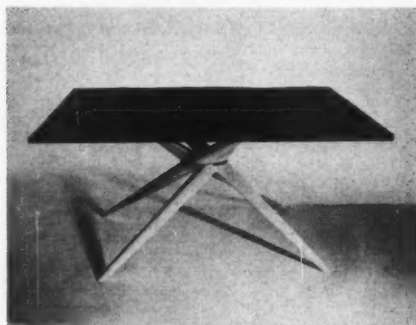
ESTABLISHED 1853

PRODUCTS

(Continued from page 300)

age. The legs of the tables achieve a sculptural appearance due to a metal or wooden ring enclosing them a little above the middle, allowing them to fall into a gracefully splayed support. The legs have a rubbed lacquer finish in maple and a natural wax finish in walnut, and are collapsible for moving or storage. Table tops may also be ob-

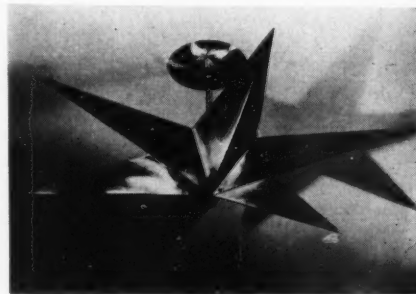
Splayed legs joined by metal ring form attractive base for slate coffee table



tained in glass. Available in both end table and cocktail table heights, they come in round, square or oblong shapes. Richards-Morgenthau Co., 225 Fifth Ave., New York, N. Y.

Wall and Ceiling Fixtures

A new collection of wall and ceiling fixtures has been designed for Lightolier by Isamu Noguchi, Japanese-American sculptor, and Sarfati of Milan. Employing the use of free form and introducing an imaginative element, the collections are appropriately named *Sculpture in Light* (Noguchi) and *Fantasies* (Sarfati). The Noguchi collection consists of four



Softly diffused light is given by gold six-pointed star by Sarfati

to throw a controlled beam of light from a very high place—a job for one of Century's optically engineered lighting instruments

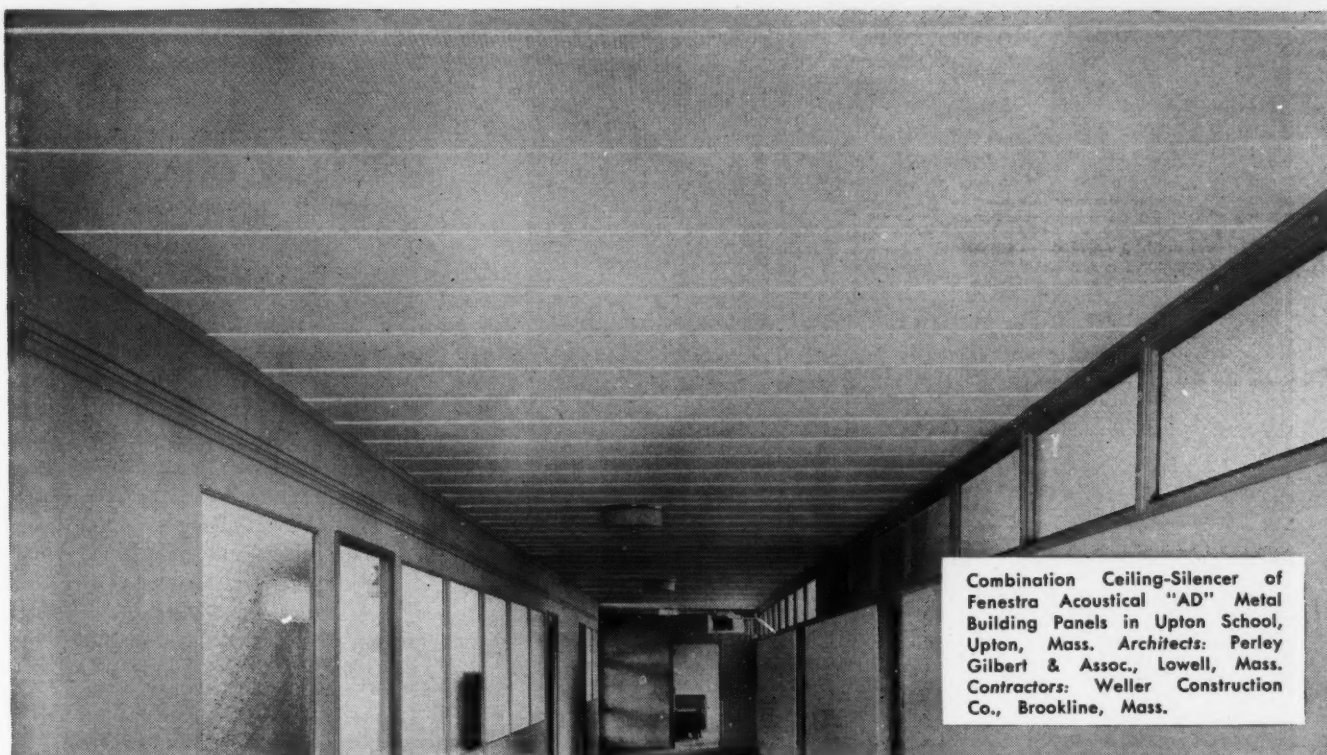
CENTURY LIGHTING, INC.,
521 WEST 43RD STREET,
NEW YORK 36

626 NORTH ROBERTSON
BOULEVARD,
LOS ANGELES 46

designs: two wall, one ceiling and one table, which are available at reasonable prices. Flowing curves and a strong illuminated sculptural effect are the chief characteristics of the lamps. The Sarfati collection contains some 24 models, ranging from a tiny bell-shaped wall pin-up to a very large ceiling fixture. Sarfati has used brilliant, high-fashioned colors counterpoised against pure whites, gleaming brass and dull-finished steel and many of his designs have an unusual mobility. Lightolier, Inc., 11 E. 36th St., New York, N. Y.

CORRECTION

The American Sterilizer Co. advertisement on page 57 of the April, 1952 issue of *ARCHITECTURAL RECORD* erroneously listed H. H. Beckanstin as architect for Habersham County General Hospital, Demorest, Ga. Architects for the building were David S. Cuttino, Jr. & Associates.



Combination Ceiling-Silencer of Fenestra Acoustical "AD" Metal Building Panels in Upton School, Upton, Mass. Architects: Perley Gilbert & Assoc., Lowell, Mass. Contractors: Weller Construction Co., Brookline, Mass.

Fenestra's New Structural-Acoustical Ceiling Keeps Rooms Quiet . . . Cuts Building Costs

Here's a wonderful, economical way to hush the hubbub in corridors and rooms in the new building you're planning.

Fenestra* Acoustical "AD" Metal Building Panels form acoustical ceiling and structural subfloor or roof—all in one package . . . saving building time, labor, materials and money!

An "AD" Panel is a box beam with a flat surface top and bottom and open space between. The top surface forms the subfloor or roof deck. The perforated bottom surface forms the ceiling. In the open space is glass fiber insulation (see

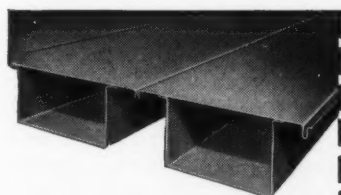
illustration below).

You can see how a Fenestra combination Structural-Acoustical Ceiling cuts building costs. It is speedily and easily erected—the panels interlock. It is practically indestructible. Bumps and knocks can't hurt it. The acoustical efficiency is not affected by washing or painting. And these panels are noncombustible.

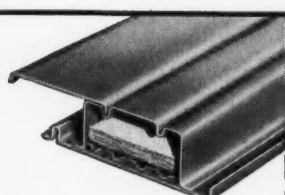
For further information call your Fenestra Representative. Or write Detroit Steel Products Company, Dept. AR-6, 2252 East Grand Boulevard, Detroit 11, Michigan.

*Trademark

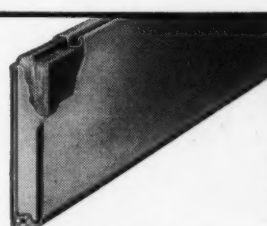
Fenestra METAL BUILDING PANELS ...engineered to cut the waste out of building



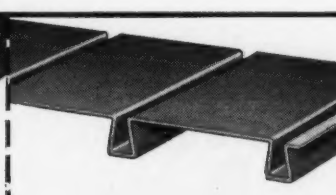
"D" Panels for floors, roofs, ceilings. Standard width 16". Depth 1½" to 7½".



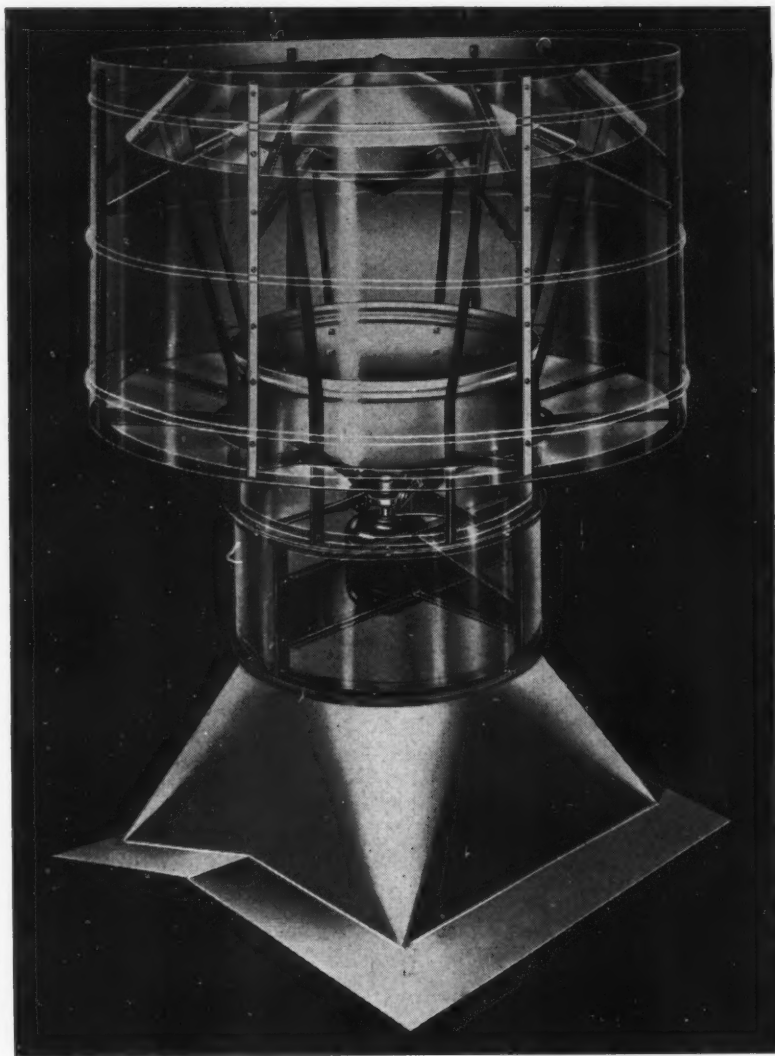
Acoustical "AD" Panels for ceiling-silencer-roof. Width 16". Depth up to 7½".



"C" Insulated Wall Panels. Standard width 16". The depth is 3".



Holorib Roof Deck. 18" wide—lengths up to 24'. Surface can be plain or acoustical.



BURT FREE-FLOW FAN VENTILATOR PROVIDES ECONOMICAL DOUBLE-DUTY VENTILATION

When normal exhaust needs are not extreme, the Burt Free-Flow Fan Ventilator serves efficiently as a gravity unit. But when production operations create high temperatures or excessive fumes, dust, etc., its Axial Flow Airfoil Fan exhausts impurities approximately six times faster. Positive ventilation is assured at wide differences of temperature, pressure and volume. Sizes range from 12" with a rated capacity of 1040 C.F.M. to 84" giants weighing almost 2 tons with 99050 C.F.M. For further details see Sweet's or write for Bulletin SPV-10A.

FAN & GRAVITY VENTILATORS • LOUVERS • SHEET METAL SPECIALTIES

The Burt Manufacturing Company

48 E. South Street • Akron 11, Ohio

Architectural Engineering

LITERATURE

(Continued from page 218)

Movable Metal Walls

Mills Movable Metal Walls, Catalog No. 52. The manufacturer's complete line of metal partitions is illustrated in this catalog together with construction details, specifications, and installation and construction photographs. Separate sections deal with flush pilaster, executive, semi-flush and commercial partitions, and a complete illustrated listing of accessories is included. 48 pp., illus. Mills Co., 975 Wayside Rd., Cleveland 10, Ohio.*

Latex Treated Paper

Neoprene Treated Paper. Booklet describes properties — wet strength, internal bond and impact strength, chemical resistance — obtained in various kinds of papers by addition of small amounts of the manufacturer's rubber latex to the paper pulp. A table of possible applications suggests many uses for paper products so treated. 12 pp., illus. E. I. du Pont de Nemours & Co., Public Relations Dept., 8545 Nemours Bldg., Wilmington, Del.*

Floor Maintenance

Your Floors and How to Maintain Them. Reference manual outlines in detail methods of floor maintenance employing the manufacturer's line of varied products for this purpose. Separate sections deal with asphalt tile, concrete flooring, terrazzo and magnesite, rubber tile, wood flooring, linoleum, and carpets and rugs. Various liquids, floor machines, rug scrubbers and attachments are illustrated. 41 pp., illus. Multi-Clean Products, Inc., 2277 Ford Parkway, St. Paul 1, Minn.

Radiant Ceiling

Burgess-Manning Ceiling. Bulletin describes the manufacturer's new radiant ceiling, which consists of modular, perforated metal panels, suspended from a grid or coil system. Information on ceiling components, performance, typical specifications, installation data and suggested applications is included. 8 pp., illus. Burgess-Manning Co., 5970 North West Highway, Chicago, Ill.*

(Continued on page 306)



Caterpillar Tractor Co.,
Remodelled Office Building A, Peoria, Ill.
General Contractor—Fred Harbers Sons, Peoria
Acoustical Contractor—J. J. Kinsella & Son, Peoria
Acoustical Tile—Fiberglas Acoustical Tile installed
on Securitee Limited System

conomy

SECURITEE SYSTEMS*, mechanical attachments for erecting acoustical tile, offer substantial savings to architects and contractors in three ways.

Quality . . . only the finest of materials are used in the manufacture of component parts, assuring uniformity and eliminating rejects . . . saving time and money for installation contractors.

Easy installation . . . by actual test acoustical ceiling units can be installed quicker and with less effort on Securitee Systems . . . reducing labor costs and allowing a truer and more level ceiling.

Durability . . . component parts of all Securitee Systems are carefully tested for weight load and will last the life of the building, doing away with replacements and structural defects.

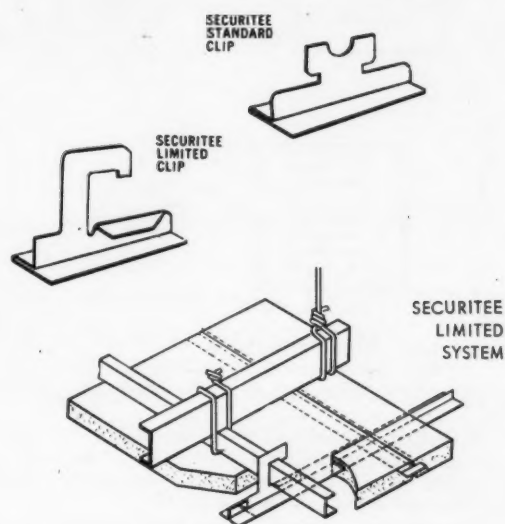
Specify and insist on Securitee—the outstanding suspension system on the market.

See Sweet's Architectural File or write direct for complete technical data

W. J. **HAERTEL** & CO

832 West Eastman Street • Chicago 22, Illinois

West Coast Distributor **FREY & HAERTEL, Inc.**, 125 Barneveld Ave., San Francisco 24, Calif.



*T.M. Reg.
U.S. Pat. Off.

Securitee
SYSTEMS



Assembly RM452 pre-rinses dishes, disposes garbage simultaneously—ahead of dishwasher. Equipped with "Silver-Gard" and pre-rinse.

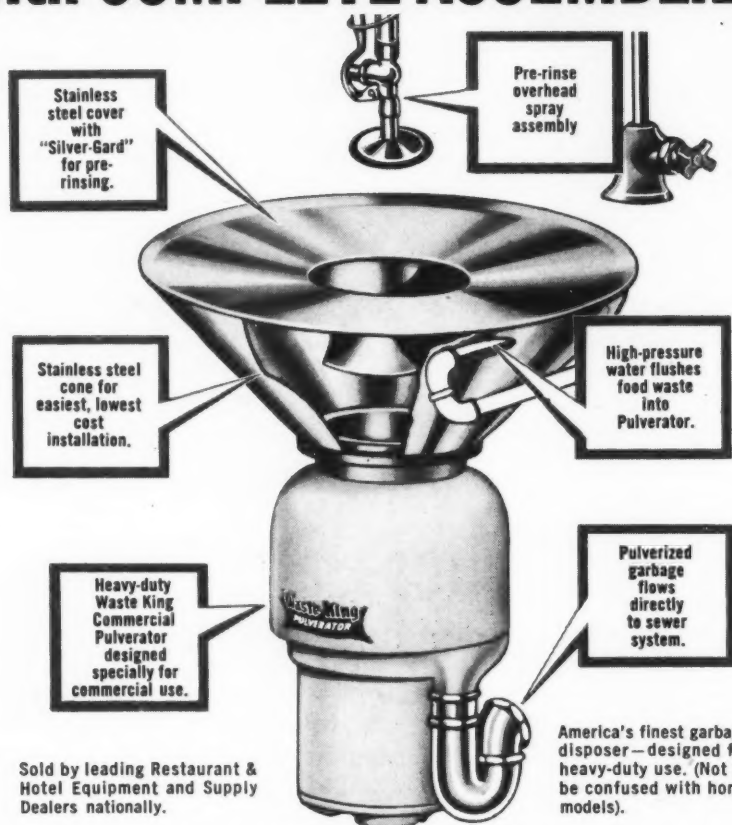


Assembly RM352 is used at various centers where garbage occurs—in the dishwashing and vegetable center—and other centers of activity.

New! Waste King

Commercial Pulverator

with COMPLETE ASSEMBLIES!



ELIMINATE GARBAGE AT POINT OF ORIGIN! Complete Waste King Commercial Pulverator Assemblies designed to dispose of all garbage at the dishwashing area, cooks' table, rough vegetable and salad preparation center—other centers of activity where garbage occurs. Accumulation of garbage is eliminated.

PROVED AND ACCEPTED BY THE FOOD SERVING INDUSTRY. Thousands of Waste King Commercial Pulverators are being used daily in Restaurants, Hotels, Camps, Factory Commissaries and other food serving fields. Whether 100 or 100,000 meals a day are served—garbage costs are changed into profits with a Waste King Commercial Pulverator!

Remember! "Savings are as important to Profit as Sales"



A Product by Given Mfg. Co., Los Angeles, Calif.



Dept. AR-6 Given Mfg. Co.
1250 Wilshire Blvd., Los Angeles 17, Calif.

☐ Send full details on WASTE KING Commercial Pulverator Assemblies.

☐ Send name of nearest restaurant and hotel equipment and supply dealer.

Firm Name _____

Address _____

City _____ State _____

Your Name _____ Title _____

Architectural Engineering

LITERATURE

(Continued from page 304)

Hardboard Applications

Masonite Hardboards in Architectural Design and Construction. Booklet deals with properties, characteristics, uses and proper application procedures for the manufacturer's hardboard products. Information on working, bending, fastening and finishing is included, and architectural specifications are given. 25 pp., illus. Masonite Corp., 11 W. Washington St., Chicago 2, Ill.*

Expanded Metal

Penmetal Expand J Metal Meshes. Catalog illustrates the manufacturer's line of expanded metal products, including both standard and flattened sheets of expanded carbon steel, stainless steel, aluminum, monel and inconel. A wide variety of uses for the product are also shown, with suggestions for still more. Tables of sizes, dimensions and weights are included, and a number of the meshes are depicted in actual size photographs. Information concerning the properties and manufacture of the product is also given. 25 pp., illus. Penn Metal Co., Inc., General Sales Offices, 205 E. 42nd St., New York 17, N. Y.*

Electric Trucks

Yale Worksaver Electric Trucks. Application, types and operation features of the manufacturer's line of motorized hand trucks and electric stackers are described in this bulletin. Pallet, platform, high lift platform, high lift fork, and tractor types are shown. A special section illustrates various attachments that permit handling of a wide range of objects without pallets. 15 pp., illus. Yale and Towne Mfg. Co., Philadelphia Div., 11,000 Roosevelt Blvd., Philadelphia 15, Pa.

Gas Fired Sectional Ovens

Blodgett's Build Business. Accordion-type folder offers data on the manufacturer's line of bake ovens with helpful hints for increasing efficiency with the units. 32 pp., illus. G. S. Blodgett Co., Inc., 50 Lakeside Ave., Burlington, Vt.

(Continued on page 308)

Now! For The Very First Time!

SLIDING SIDE DOOR FOR HOME GARAGES

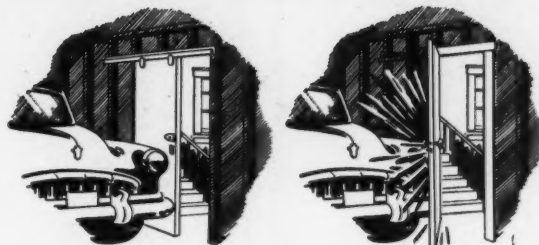
with



in a Complete Packaged Set!

HINGED SIDE DOORS IN HOME GARAGES ARE ALWAYS IN THE WAY

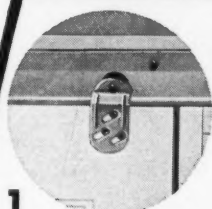
Now, Sterling offers an easy solution to this problem. The new Sterling No. 890 Sliding Door Set is designed especially for sliding side doors in home garages. Here is a side door that is never in the way as it slides along the wall. The door can be made as wide as desired so lawn mowers and large equipment can be taken in and out of the garage easily.



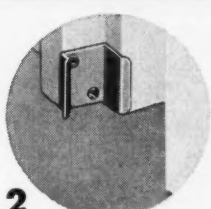
Drive in Easily.....without Bumping!

Here Is The Package!

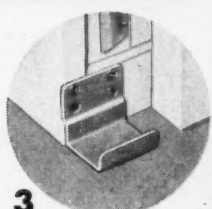
Sterling No. 890 Sliding Door Set



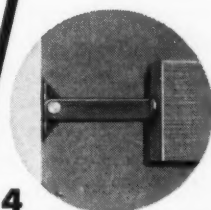
1
Adjustable Hangers with Track for doors up to 3' wide.



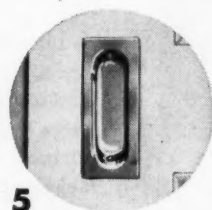
2
Edge Guide aligns door in closed position and makes it secure.



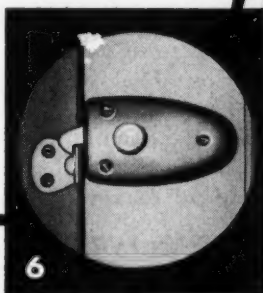
3
Floor Guide eliminates track on the floor. No grooving of door.



4
Back Stop permits full door opening, yet protects fingers and key.

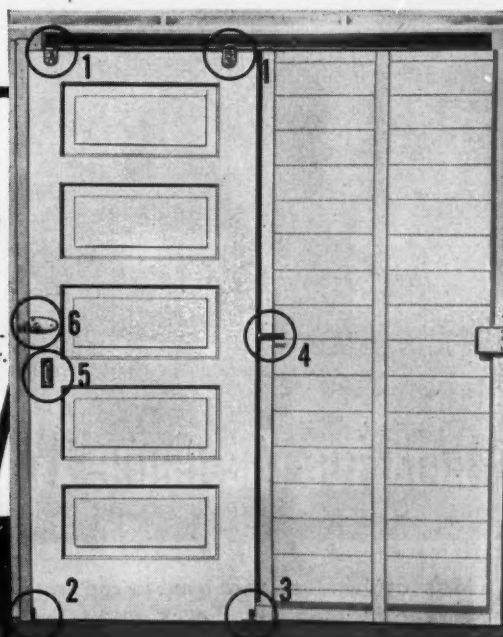


5
Flush Pulls. Large for easy operation. Two furnished.



STERLING SLIDING DOOR LOCK

No. 1025 Rim Type Lock with Cylinder. This new lock is designed for sliding side doors. Not included in Set but available as an extra.



Write for complete information on Other **STERLING PRODUCTS**

- RESIDENTIAL SLIDING DOOR HARDWARE
- CASEMENT WINDOW HARDWARE
- PULL-TITE CLOSERS
- STORM SASH HARDWARE
- TRANSOM OPERATORS

Mail Coupon Today!

STERLING HARDWARE MFG. CO. Dept. SD-10
2345 W. Nelson St., Chicago 18, Illinois

Please rush complete information on new
Sliding Door Set and Lock

Name	_____
Address	_____
City	_____
Zone	_____
State	_____



Nationally Advertised

★ See our Catalog in Sweet's
Architectural File 18d/ST and Builders' File 4e/ST

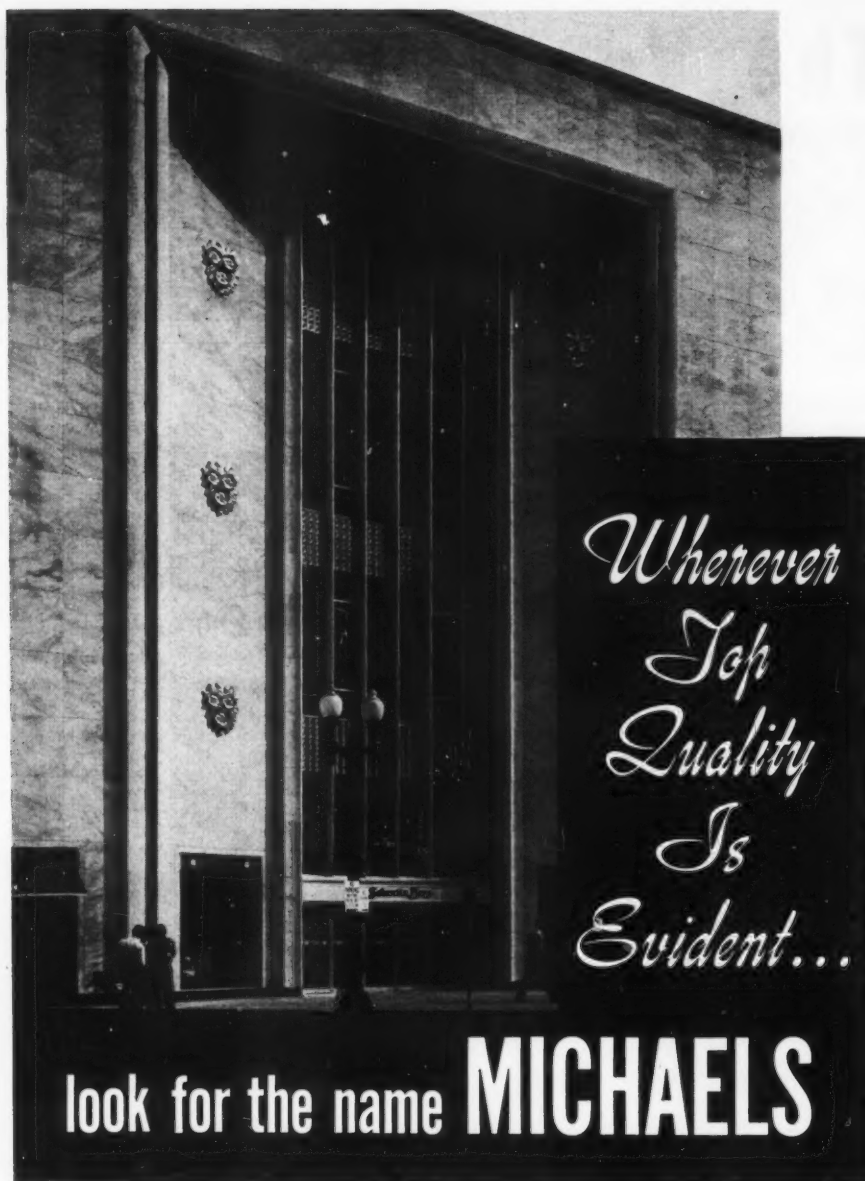
★ Visit our Display at...
The Architects Samples Corp., New York City



STERLING HARDWARE MANUFACTURING CO.

2345 W. Nelson Street

Chicago 18, Illinois



Most of the aluminum used in the construction of Sakowitz Bros. building,* Houston, Texas, was fabricated by Michaels. The inviting entrance shown above, and the pleasing interior of this ultra-modern structure, are striking examples of the beautiful effects the carefully planned use of nonferrous metal makes possible.

Michaels metal building products are recognized everywhere as tops in quality, and fabricated to exact specifications. So specify Michaels on your next job. You'll find them a thoroughly reliable source of supply.

*Architect: Alfred Finn. Contractor: Tellepsen Construction Co.

MICHAELS PRODUCTS

Bank Screens and Partitions	Name Plates
Welded Bronze Doors	Wrought and Cast Radiator Grilles
Elevator Doors	Grilles and Wickets
Store Fronts	Kick and Push Plates
Lettering	Push Bars
Check Desks (standing and wall)	Cast Thresholds
Lamp Standards	Extruded Thresholds
Marquises	MI-CO Parking Meters
Tablets and Signs	Museum Trophy Cases
Stair Railings (cast and wrought)	

The MICHAELS ART BRONZE CO., Inc., 234 Scott St., Covington, Ky.

Manufacturers since 1870 of many products in Aluminum, Bronze and other metals



Architectural Engineering

LITERATURE

(Continued from page 306)

Sheet Copper Applications

Copper Sheet Metal Work. Portfolio shows suggested details of new and improved methods of sheet metal work for residential and commercial construction. Designs require minimum amount of copper for maximum weather protection, according to the manufacturer. 30 pp., illus. American Brass Co., Waterbury 20, Conn.*

Wall Form Construction

Symons System of Wall Form Construction. Circular describes the manufacturer's system for rapid construction of forms for concrete walls, employing standard wood panels, hardware and fittings. Components of the system and assembly procedures are illustrated. 4 pp., illus. Symons Clamp and Mfg. Co., 4249 Diversey Ave., Chicago 39, Ill.*

Stud Welding Procedures

How to Design for Nohwelding. In addition to listing stud specifications and recommended stud selection guides, this manual presents suggestions for template design, provisions for accommodating fillet and a table on minimum stud clearances applicable to the manufacturer's portable stud welding gun. 8 pp., illus. Nelson Stud Welding Div., Gregory Industries, Inc., Lorain, Ohio.*

Decorative Plywood

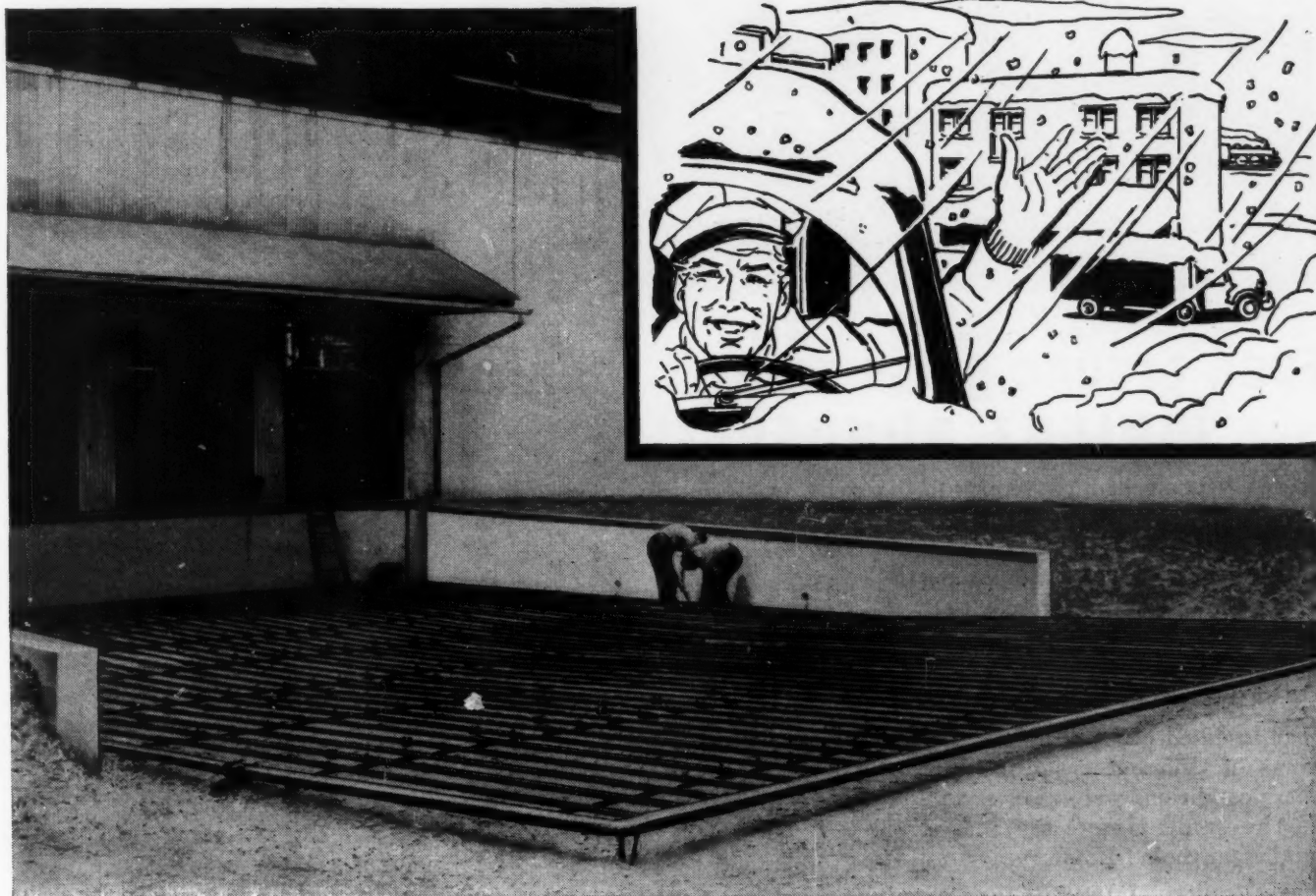
Sea Swirl. Booklet gives suggestions for use with colored illustrations of interior applications. Information on sizes, how to apply and finish the wood is included and brochure describes various possibilities, such as walls, ceilings, built-ins, furniture, etc. 16 pp., illus. Associated Plywood Mills, Inc., P.O. Box 672, Eugene, Ore.*

Upholstery and Wall Covering Fabric

Gateway to a New Conception in Interior Design. Folder describes new plastic fabric. Patterns are shown, and colored illustrations point out texture. Walter M. Ballard Corp., Design and Decoration, 120 E. 55th St., New York 22, N. Y.

(Continued on page 310)

"Just a Breeze" in any Snowstorm!



No stuck trucks at loading docks with steel pipe snow melting

All the precious time gained, high-balling the highway with urgently needed cargo, or making fast work of local deliveries, can be lost forever by a jam at an inclined or declined loading or receiving dock, caused by just a skim of ice or a mere half-inch of snow to say nothing of a heavy storm!

Yet for a comparatively minor investment, dock approaches and aprons can be kept snow and ice free all winter long. So, far-sighted managements are licking this weather

problem at the docks with steel pipe snow melting systems . . . and the big wheelers roll in and out "in a breeze."

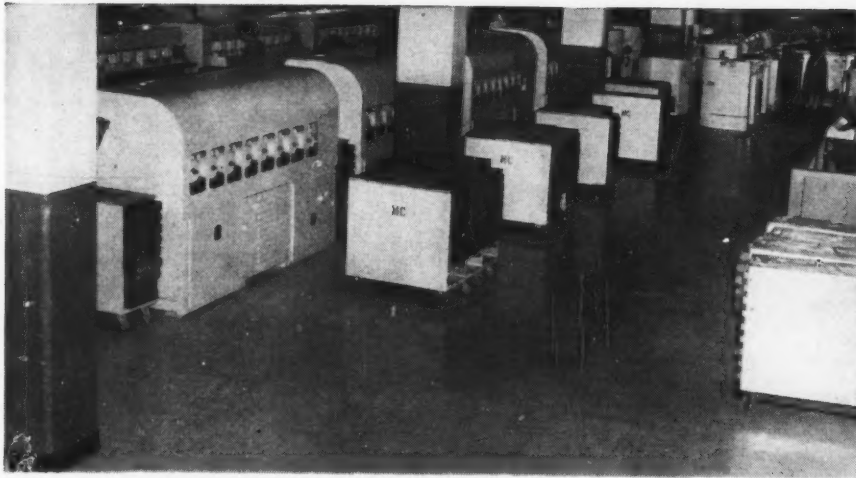
Snow melting and steel pipe go hand-in-hand. Economy in purchase and durability in service make it a natural for this application. Add the important factors of formability and weldability for panel fabrication and you have the reasons why steel pipe is first choice for snow melting systems—and why it's the most widely used pipe in the world!

**Steel Pipe
is First Choice**

COMMITTEE ON STEEL PIPE RESEARCH

AMERICAN IRON AND STEEL INSTITUTE

350 Fifth Avenue, New York 1, N.Y.



WRIGHTFLOR RUBBER TILE in lens grinding plant of Bausch & Lomb Optical Company at Rochester, New York.

Even ground glass doesn't bother WRIGHT RUBBER TILE

Bausch & Lomb had a severe problem in their plant at Rochester, New York. They needed a floor covering that would stand up under a constant bath of kerosene, oil, abrasives used to grind lenses, and the ground glass itself. It sounded like an impossible problem.

They installed promising floor coverings of different types in areas where conditions were most severe. At the same time they tested samples in their laboratory.

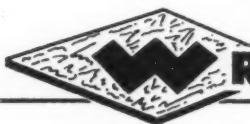
All tests indicated that WRIGHTFLOR was by far the best of all materials

tested. Successful service on the job was final proof that WRIGHTFLOR would stand up.

Bausch & Lomb now has over 40,000 feet of WRIGHT RUBBER TILE in their plant and are replacing office floors with WRIGHT as soon as the present floors become worn.

Your floor covering requirements probably are not nearly so severe as those of Bausch & Lomb, but this performance record is proof that you can take advantage of the beauty, comfort, safety and ease of maintenance of WRIGHT RUBBER TILE in every installation.

WRIGHT MANUFACTURING COMPANY
5205 Post Oak Road • Houston 5, Texas



RIGHT RUBBER TILE

FLOORS OF DISTINCTION

- ♦ WRIGHTEX—Soft Rubber Tile
- ♦ WRIGHTFLOR—Hard Surface Rubber Tile
- ♦ WRIGHT-ON-TOP Compression Cove Base

Below, WRIGHTEX RUBBER TILE in Bausch & Lomb display room.



Architectural Engineering

LITERATURE

(Continued from page 308)

Roof Insulation

Insulite Roof Insulation Manual. Brochure gives latest instructions for applying the manufacturer's roofing insulation over poured gypsum, wood, concrete, unit tile and steel roof decks. Engineering tables are included to help roofing contractors meet specified requirements, and product descriptions and performance data are given for the two basic types of the insulation: regular wood-fibre board and asphalt-impregnated board. 12 pp., illus. Insulite, 500 Baker Arcade Bldg., Minneapolis 2, Minn.*

Laminated Panels

Noroply, A.I.A. File No. 23-L. Brochure describes new laminated wood paneling, giving all physical characteristics. Acoustical properties, strength, weight, fabrication, cost, installation and other features are discussed, and illustrations of uses in wall panels, furniture, doors, and core material for plastic laminates are shown. 8 pp., illus.

Armoply Chalkboard, A.I.A. File No. 35-B-1. Contains information on new chalkboard, describing outstanding qualities. Explains ways in which magnetic material may be used. Recommended specifications are included. 4 pp., illus.

Micarta, A.I.A. File No. 35-C-12. Gives color examples of different patterns, including linen, solid decorator colors, mother of pearl, truwoods and new authentic printed woods. Full range of sizes is given and recommended specifications are included. Although a product of Westinghouse, it is distributed by U. S. Plywood. 8 pp., illus. U. S. Plywood Corp., 55 W. 44th St., New York, N. Y.*

LITERATURE REQUESTED

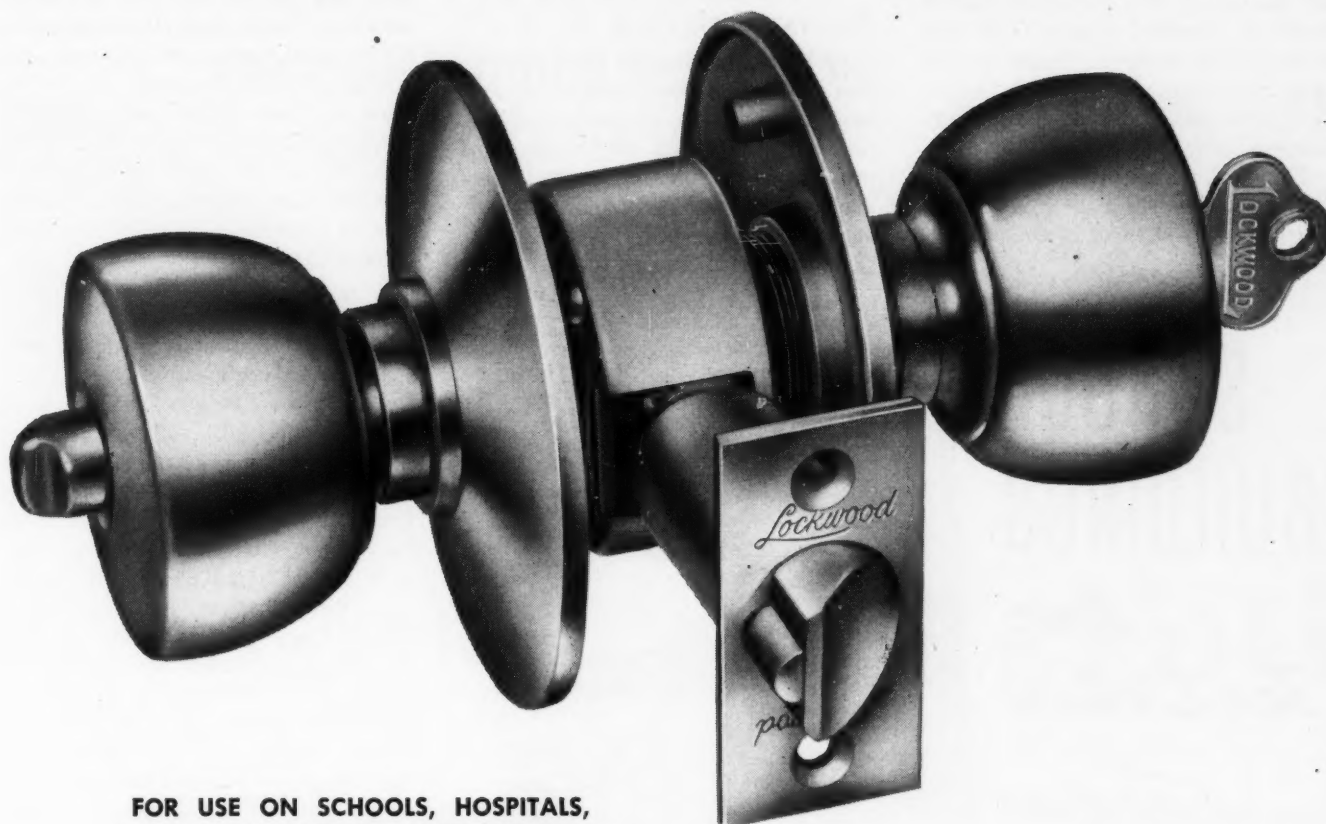
The following individuals and firms request manufacturers' literature:

Charles S. Bicksler, Architect, Sanders & Thomas, Inc., Security Trust Bldg., Pottstown, Pa.

A. Calvin Hoiland, Architect, 301 Electric Bldg., Great Falls, Mont.

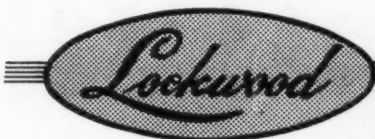
Muzio & Cerruti, Architects-Engineers, Calle Pozos 265-2° piso B., Buenos Aires, Argentina, S. A.

Satisfaction Assured!



FOR USE ON SCHOOLS, HOSPITALS,
HOTELS, COMMERCIAL, INSTITUTIONAL
AND INDUSTRIAL BUILDINGS

Lockwood's Heavy Duty Key 'n Knob Lock . . . specified by architects because of rugged construction, dependable security and trouble-free performance. Quickly installed. Permanently aligned assembly . . . no binding of parts. Hatten Design (shown above) combines comfort and dignity. Can be master keyed with the complete line of Lockwood mortise and rim locks, padlocks and automatic exit devices. The name Lockwood means SATISFACTION ASSURED!



LOCKWOOD HARDWARE MFG. CO.

FITCHBURG, • MASSACHUSETTS

See complete descriptions in



THE RECORD REPORTS

WASHINGTON (Cont. from p. 38)

industrial facilities and this entitles owners to self-authorize up to 25 tons of carbon and alloy steel including all types of structural shapes. This self-authorization, however, cannot include more than two and one-half tons of alloy steel and it cannot contain any stainless steel.

The owner also may self-authorize 2000 lb of copper and copper base alloys, and 1000 lb of aluminum. All

CMP material quantities are on a per project per quarter basis.

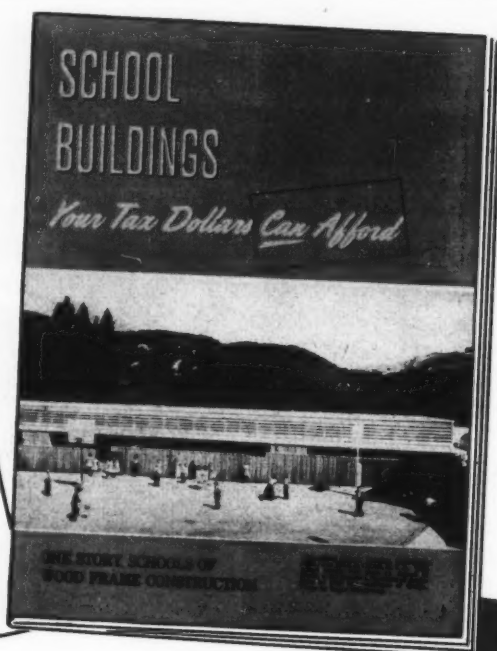
Towers Gobble Steel

Problems will arise in the construction of antenna towers because of their large consumption of steel. A 400-ft tower, for example, will require approximately 45 tons of steel. Towers reaching to 60 and 70 ft require approximately 38 tons each.

SCHOOL BUILDINGS

Your Tax Dollars

Can Afford



This timely publication, featuring one story schools built of wood frame construction in all parts of the country, is so popular that it is now in its third printing.

Architects like its 24 pages of exterior and interior illustrations—its carefully prepared data on costs, safety factors for fire, earthquake and wind, flexibility, permanence and—its illustrations of well designed Teco timber connector trusses, glued laminated arches and Lamella roof construction.

Experienced fabricators in all sections of the country are ready to supply timber trusses and framing ready to erect for schools and other types of buildings.

Specify timber—there's plenty of it and ready as usual for early delivery.

AR

TIMBER ENGINEERING COMPANY 1319 18th St., N.W., Washington 6, D. C.

Please send me FREE copy of "School Buildings Your Tax Dollars Can Afford."

Name.....

Company.....

Street..... City..... State.....

These estimates do not include the additional steel builders will require in reinforcing bars for concrete foundations for these antennas. A tower exceeding 60 ft in height requires a lot of steel just for the concrete reinforcing bars in its foundations, a spokesman for the National Production Authority said.

Copper can be expected to bottleneck some extensive projects. It generally was agreed, however, that on the smaller jobs, and in cases where existing buildings are to be expanded, owners will be able to turn the trick with their self-authorization privileges.

FCC Processing Starts July 1

FCC expected to start processing construction applications July 1. As was stated, a precise figure of 2053 has been announced for the number of new stations FCC has scheduled. But there are an additional 500 hold-over applications; those that were received before the ban was ordered, but which received no action. These will be activated by re-filing. When the removal of the restriction first was announced, FCC said it handed out more than 3000 application blanks. Many comers took several blanks; but even so it is expected that close to 3000 new stations will be provided for in the lifting of the ban.

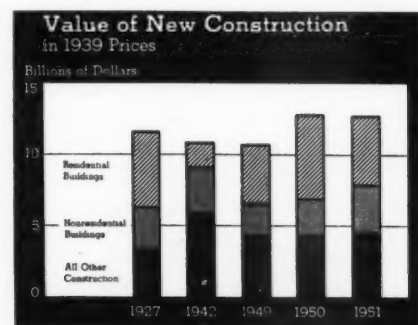
Applications for construction permits go directly to the Commission. These must show engineering specifications in some detail, source of funds and location of the project; basic drawings must be attached. The license for operation is given after the station's completion.

Fowler Gets Dual Job as Fleischmann Leaves DPA

The resignation of Manly Fleischmann as Defense Production Adminis-

(Continued on page 314)

BUILDING TOTALS COMPARED



The graph above compares value of new construction for five key years. Source: NPA's monthly "Construction and Building Materials"

Art Museum

Chooses Lighting Artistry by LITECONTROL

This lighting job by Litecontrol was voted a Gold Seal Merit Award Certificate in the competition conducted by the Industrial & Commercial Lighting Equipment Section of the National Electrical Manufacturers Association. Submitted by John Perry, Architect, New Britain, Conn.

JOB: Art Museum of New Britain Institute, Stanley Wing, New Britain, Conn.
ARCHITECT: Delbert K. Perry & Associate, John Perry, New Britain, Conn.
ELECTRICAL CONTRACTOR: Peterson Electric Co., New Britain, Conn.
FIXTURES: 30 Special No. F74 4-lamp fixtures.
4 Special 4-lamp corner mitred fixtures.
LAMPS: Standard warm white fluorescent.
AREA: 32' x 60' x 12' ceiling height — 1,920 square feet.
WATTS: 6,500.
WATTS PER SQUARE FOOT: 3.3.
AVERAGE INTENSITY ON PAINTINGS, vertical plane (outside row of lamps only) 20 footcandles in service. (With all lamps on) 32 footcandles in service.

Here paints the magic brush of light . . . custom-tailored by LITECONTROL . . . by the ingenious modification of standard Litecontrol fixtures.

But because they are crafted by lighting artisans . . . and made in many styles and designs . . . LITECONTROL fixtures provide installations which are "standard" in price only, definitely custom in appearance and performance.

Problem here was to enable paintings on wall to be featured or, when desired, to permit featuring of floor

displays (see small photo). *Planned Lighting by Litecontrol* provided fixtures with outside lamps operating independently of inside lamps, with light shielded by a vertical baffle. Thus, the outside row alone evenly illuminates the paintings around the

walls, or the inside row alone can be used to highlight center displays. Note how the fixture row follows the room contour, even at the mitred walls, for evenness of illumination.

On your next lighting problem, call in LITECONTROL — and save.

LITECONTROL *Fixtures*

KEEP UPKEEP DOWN

See You at Booth 102, Lighting Exposition

LITECONTROL CORPORATION, 36 Pleasant Street, Watertown 72, Massachusetts

DESIGNERS, ENGINEERS AND MANUFACTURERS OF FLUORESCENT LIGHTING EQUIPMENT DISTRIBUTED ONLY THROUGH ACCREDITED WHOLESALERS

THE RECORD REPORTS

WASHINGTON (Cont. from p. 312)

trator, effective May 31, was in no way expected to change the control suspension policies of the two agencies involved — Defense Production Administration and National Production Authority.

The policies to move toward removal of controls over construction materials as rapidly as indicated future supply and military "take" would permit had been worked out carefully. Henry H.

Fowler, Virginia attorney who was named to take over the Fleischmann duties in DPA while continuing his own as head of NPA, had worked closely with Mr. Fleischmann for many months; established courses of action represented the combined thinking of both men.

Fleischmann's Going Expected

Mr. Fleischmann's resignation came as no surprise. He long had said he

wanted to return by midsummer to his law practice at Buffalo, N. Y. On February 5, 1951, he moved from the position of acting NPA administrator to that of full NPA administrator. He had served as general counsel for that agency since its formation in September 1950.

Last December 28, Mr. Fleischmann resigned as NPA head to devote his full time to DPA operations. And on January 8 the appointment of Fowler to head NPA was announced.

Both Mr. Fleischmann and Mr. Fowler had had World War II experience in Washington. The Buffalo attorney entered federal service in April 1941, serving until August 1943 as assistant general counsel of the War Production Board and its predecessor agencies. During World War II Mr. Fowler also served as assistant general counsel to the WPB, later moving to the position of legal advisor to the National Resources Board. He came to NPA as deputy administrator last September.

"One Direction" Sought

In giving to Mr. Fowler the dual duties of NPA and DPA, President Truman noted the increase in administrative tasks, but said he felt it wise at this time to bring all production phases of the mobilization program under one direction.

"Very significant progress has been made in the build-up phases of our production effort," President Truman wrote to Mr. Fowler. "In the completion of the further build-up tasks remaining, and in the operation phase ahead, a single production head now promises to be the most effective means of overall coordination.

Mr. Fowler was told he would report directly to Acting Defense Mobilizer John Steelman, "who agrees fully with my decision to have you occupy both the DPA and NPA administratorships."

In submitting his resignation to the White House, the former DPA administrator cited the extensive expansion of the nation's basic industrial capacity and expressed confidence that this program "will soon give us the productive facilities necessary to meet any future military emergency which might arise."

FRB Suspends Regulation W; No Promise on Regulation X

On the same day that the White House announced the personnel change in control agency administration, the Federal Reserve Board suspended its

(Continued on page 316)

WHAT DO YOU LOOK FOR IN DOORS, MR. ARCHITECT?

ADHERENCE TO SPECIFICATIONS? The caliber of the architects who regularly specify H.P.C. Solid Core Flush Veneered Doors is your assurance of complete dependability.

FIRE PROTECTION? The construction of H.P.C. Solid Core Flush Veneered Doors makes them fire-retardant.

LONG LIFE? The history of H.P.C. Solid Core Flush Doors is a record of lifetime performance in all types of service.

BEAUTY? H.P.C. Solid Core Flush Doors may be covered with any type of veneer finish you specify.



H.P.C. SOLID CORE FLUSH VENEERED DOORS

are the product of more than 40 years' specialization, backed by continuous research, the most modern equipment and the highest type of skilled craftsmen. Available in standard or special types. Write for the H.P.C. "Manual of Veneered Doors."

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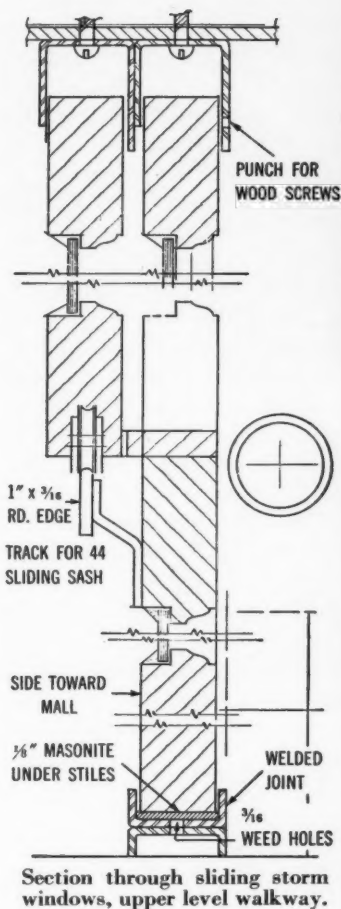
LOS ANGELES

ST. LOUIS

SHREVEPORT



FRONT DETAILS FOR YOUR STOREFRONT FILE



Shoppers' World, Framingham, Mass. Walkways open for summer (above); closed for winter (below).



Ketchum, Gina & Sharp, principal architects

Storm Windows Insure Shoppers' Comfort at Shoppers' World

Completely enclosing the double-deck walkways of Shoppers' World, Framingham, Mass., storm windows made with L·O·F glass keep out wintry winds, rain and snow. With walkways free of ice and slush, shoppers are thus able to walk about without overshoes, and can push baby carriages or marketing carts without difficulty. A further advantage is saving on fuel bills by cutting down heat loss from the stores.

Every shop in this one-stop center has a Visual

Front, using Libbey-Owens-Ford Polished Plate Glass—a total of 360,000 square feet of it! Many shops further attract customers with *Tuf-flex** tempered plate glass doors.

Shoppers' World is typical of what ingenuity and glass can do to make retail shops more attractive to customers. Our "Visual Fronts" book shows many design applications. Write for your free copy. Libbey-Owens-Ford Glass Company, 7562 Nicholas Building, Toledo 3, Ohio. *

LIBBEY·OWENS·FORD
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POLISHED PLATE GLASS
WINDOW GLASS

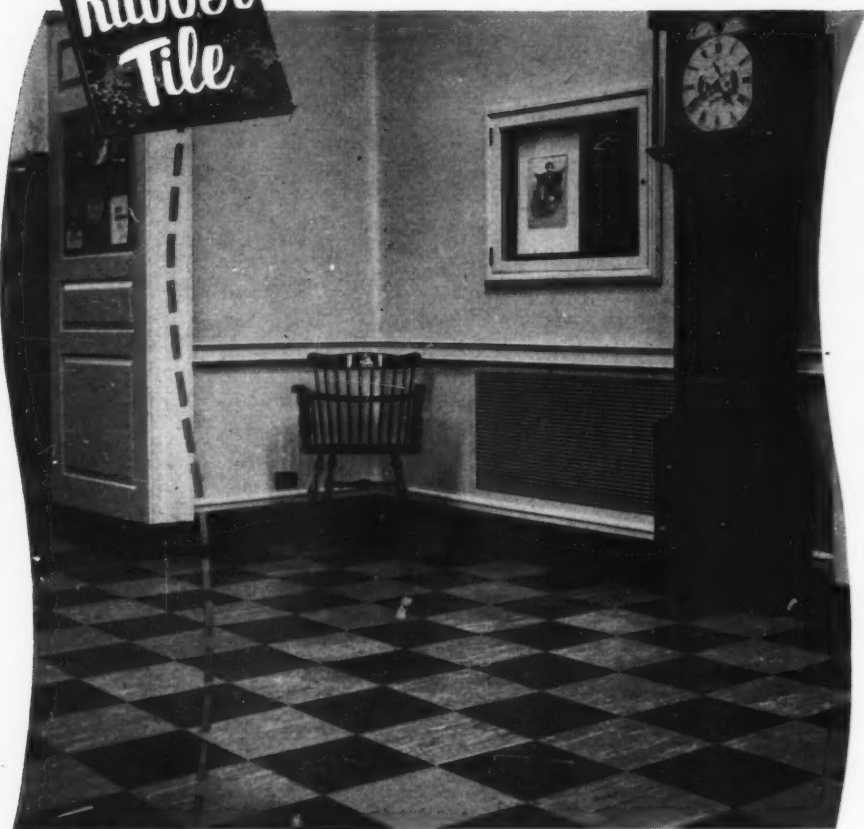
TUF-FLEX* PLATE & DOORS
SAFETY GLASS

THERMOPANE®
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VITROLITE®
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Rubber
Tile



buy silence by the tile

For every installation where quietness and comfort are all-important considerations, specify B. F. Goodrich Rubber Tile, the flooring with *Natural Resiliency*. It is so quiet underfoot . . . so comfortable to walk on.

Decor-blended colors which allow unlimited design possibilities, rich marbleization, durability and *Super-Density* which does away with dirt-catching pores, are additional features of this superior Rubber Tile.

The many advantages of B. F. Goodrich Rubber Tile have made it first choice for owners and administrators of commercial, professional and residential buildings.

For complete information on B. F. Goodrich Rubber Tile see Sweet's Catalog or write to: Dept. A6, B. F. Goodrich Co., Flooring Division, Watertown 72, Mass.

You can depend on **B.F. Goodrich FLOORING PRODUCTS**

RUBBER TILE • ASPHALT TILE • VINYL PLASTIC TILE • RUBBER COVE BASE • ACCESSORIES

THE RECORD REPORTS

WASHINGTON

(Continued from page 314)

Regulation W covering consumer goods purchases. It seemed a logical conclusion that similar action on the real estate transaction credit curb (Regulation X) would follow quickly, although the Board would make no statements to this effect.

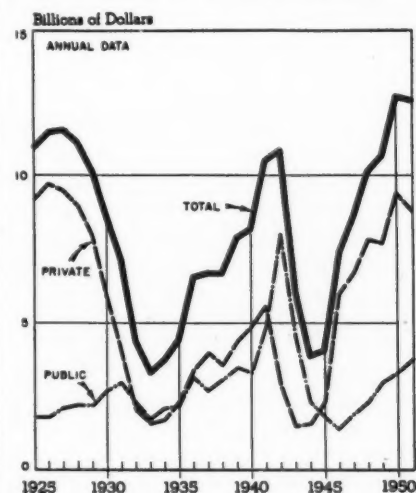
President Truman, asked if he had been consulted on the curb suspension, said he had talked with Federal Reserve System personnel about it. He added that Regulation X had not been discussed in their conversations.

The Chief Executive did stress that he believed the flexible nature of credit controls—long sought by the FRB—would be most desirable. At the same time he denied charges that the Board made its decisions for political rather than economic reasons, insisting that the FRB action came on the merits of the situation after Board members had studied results of a very comprehensive survey.

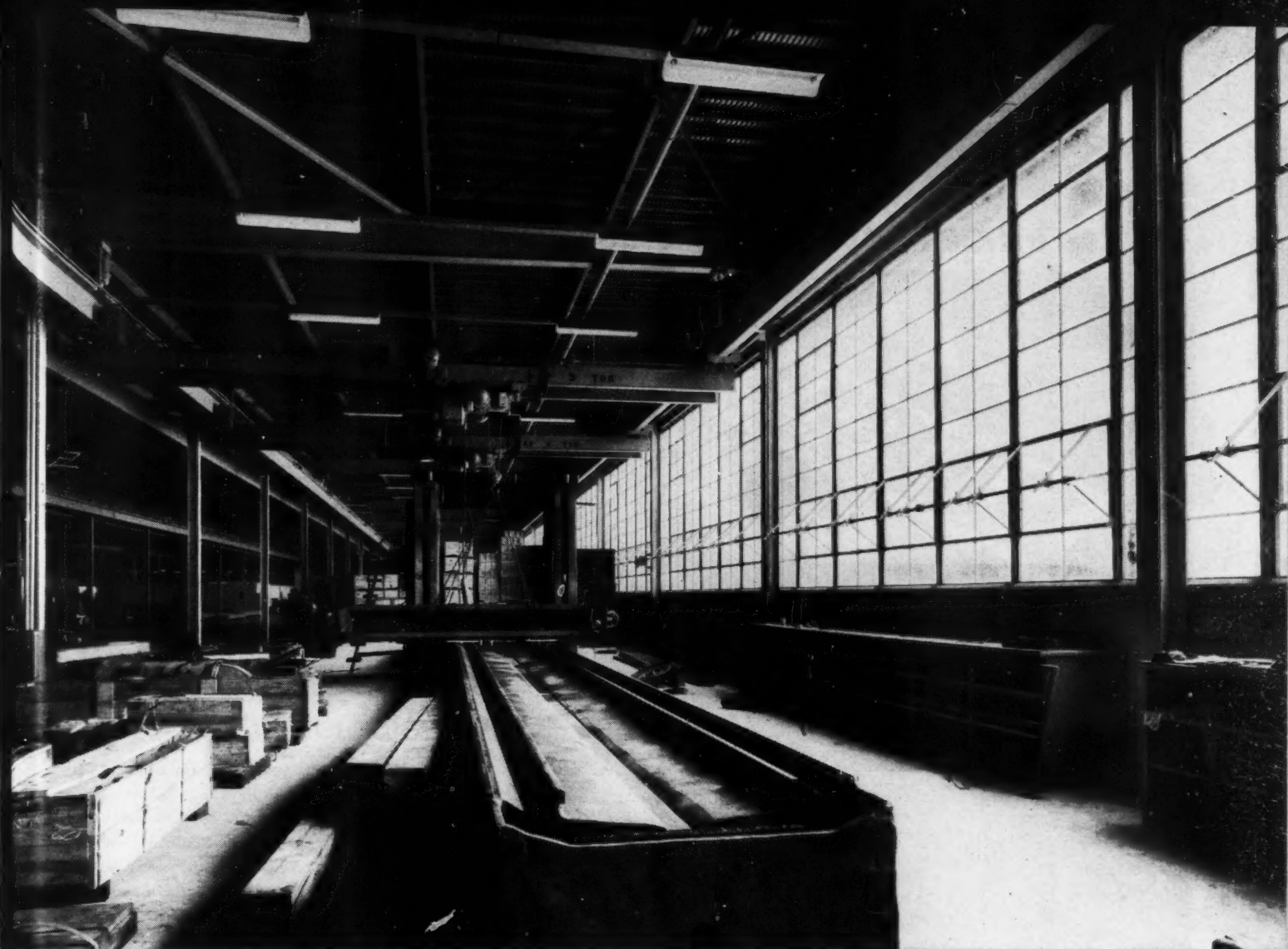
All the Board said in announcing its Regulation W action was that it felt inflationary dangers sufficiently removed to warrant the step; that consumer

(Continued on page 318)

VALUE OF NEW CONSTRUCTION



Annual data covering 1925–1952 on value of new construction in 1939 prices as shown in graph from "Construction and Building Materials," NPA's monthly report to industry



Filtered Daylight through Frosted Aklo Glass in the Goss Printing Press Co. plant, Cicero, Ill. Architects: Olsen & Urbain, Chicago.

Why men see better...feel better...work better in **FILTERED DAYLIGHT**

You see walls of blue-green glass in plants all over the country today.

Why? Looks nice, but that's not it. The two *big* benefits are: better production and happier employees.

The blue-green glass is heat absorbing. It shuts out as much as 44% of the sun's heat. Hot summer days are less tiring. People working in comfort are apt to be more productive.

Frosted Aklo* Glass reduces glare. It filters out rays

most tiring to the eyes, diffuses daylight, softens intensity of sun and bright sky. Thus, eyes are rested and seeing is more accurate.

The picture above shows how this plant is flooded with Filtered Daylight.

Want to see how effectively Frosted Aklo Glass reduces glare and sun heat? Ask your L·O·F Glass Distributor for a Radiometer demonstration and decide for yourself. Or mail the coupon.

FREE BOOK on Reduction of Sun Glare and Heat



**BLUE RIDGE
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- ☐ Please send me your book "Filtered Daylight".
☐ I would like to see a Radiometer demonstration.

Name _____ (please print)

Company _____

Address _____

City _____ State _____

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for efficient, space-saving doors



Cost-Cutting Doors for All Types of Buildings Shown in New Kinnear Catalog

Above is a typical city and some of its many different buildings equipped with Kinnear Rolling doors. In similar industrial, commercial and public buildings *throughout the world*, the famous interlocking steel-slat door (originated by Kinnear) has proved its many advantages. Coiling out of the way with smooth, vertical action, it offers maximum efficiency, protection, long service life and low maintenance. Users have found this increasingly true through more than half a century. Your free copy of this new catalog will give you latest, complete details on Kinnear Rolling Doors. Send for it today!

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Offices and Agents in Principal Cities



KINNEAR
ROLLING DOORS

THE RECORD REPORTS

WASHINGTON

(Continued from page 316)

goods were in greater supply. It was clear, however, in stating that it desired the authority for restating the control to remain in its hands for use at any time.

BRAB Conservation Study Ready for Follin Group

The final report from the Building Research Advisory Board on conservation practices among federal agencies will be in the hands of the Defense Production Administration by mid-year.

According to advance indications, this important document will go considerably farther in establishing a long-range pattern for conservation of building materials for the entire industry than had at first been expected.

BRAB has been working on all facets of the problem. Emphasis was placed on securing the best opinion of industry experts in respective technological fields and this effort in itself, according to the advisory group, has broadened the scope of the study extensively.

Long-Range Use Planned

It now is intended that the results of the investigations of agency conservation practices will be used by DPA's Subcommittee on Construction of the Conservation Coordinating Committee for charting a conservation program over many, many years. It will not be limited to a defense period guide as at first contemplated.

BRAB panel recommendations now have been prepared in full and are to be transmitted to the subcommittee headed by James W. Follin. Mr. Follin said the determinations will be made public.

BRAB explained that early in its program it was decided that conservation in permanent building construction should not be limited to specific materials; it broadened out to include cost and manpower as well. In the final concept, it said, long-term conservation is measured by the lowest annual cost of the building over its lifetime.

Criteria for Conservation

Advisers stressed these primary factors for conservation: (1) design and engineering of the building; (2) efficiency

(Continued on page 320)

THE ACTUAL IS LIMITED:

THE POSSIBLE IS IMMENSE

NEW LINCOLN PLANT CREATED BY INCENTIVE-INSPIRED CO-ACTION IN DEVELOPING POSSIBILITIES IN PRODUCT
© LE Co. 1952

13 STORY WELDED FRAMEWORK SAVES 25% STEEL

By **NED H. ABRAMS**, Architect
Sunnyvale, California

EFFICIENT use of all-welded prefabricated construction has cut steel needs by 25% and costs by 20% on this 900 ton framework. Total weight of the hotel building is estimated at one-third less than conventional structures making this 13-story, 100' x 155' building one of the lightest, yet strongest structures in the Pacific Northwest.

Light, open trusses carry most of the dead loads to the columns. Structural members are shop fabricated at low cost with fast, downhand welding techniques. Lattice columns are erected from the street while other framework is erected from a crane platform on the fourth floor level using a 123-foot boom.

During construction it was decided to increase the width of the framework from 40' to 45'. Had it not been for the welded design, such a modification would have entailed considerable cost.

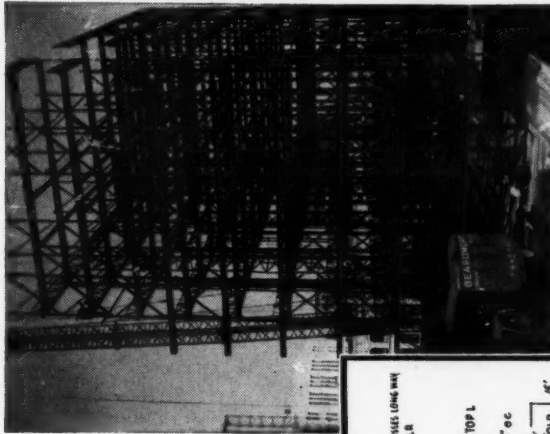


Fig. 3. All-Welded Framework for the 13-story Ridpath Hotel, Spokane, Washington. Steel Fabricators: Union Iron Works; Erectors: Dix Steel Company, Spokane, Wash.

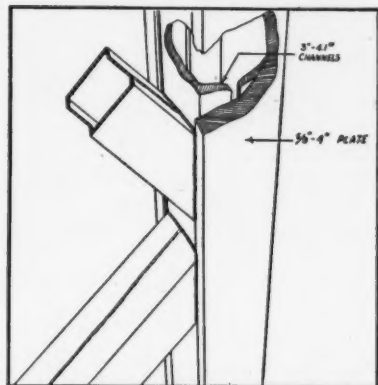
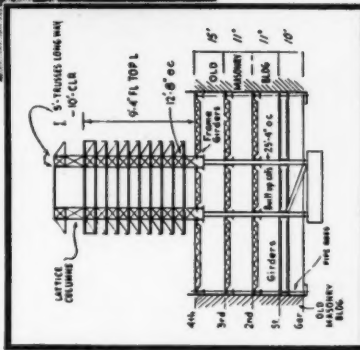


Fig. 1 Typical Detail—Lattice column shop fabricated at low cost from 3"–4.1# channels and 3/4" plates and field welded with Lincoln "Fleetweld" 5 electrodes.

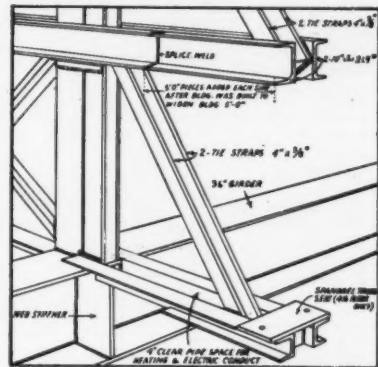


Fig. 2 Column and Spandrel Support—Typical detail fourth to eleventh stories. Shows addition of 5'0" to building by splicing 10" channels to the frame. Tie straps are 4" x 3/4" angles.

How to Design Arc Welded Structures

Latest data on calculations, procedures and costs are found in the new 9th Edition Procedure Handbook of Arc Welding Design and Practice. Price only \$2.00 postpaid in U.S.A.; \$2.50 elsewhere.

MORE PROOF

Studies in Structural Arc Welding free on request. Designers and engineers write on your letterhead to Dept. 162,

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THE WORLD'S LARGEST MANUFACTURER OF ARC WELDING EQUIPMENT

Another Globe Elevator!

America's Most
Economical Elevator
to Install, Operate
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APARTMENTS
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HOSPITALS
✓ PLANTS
STORES
WAREHOUSES



Every 15 minutes, this Globe OiLIFT elevator hauls beef from plant level to refrigerator storage. Instant accurate leveling that matches monorail sections inside and outside the car to save time in loading and unloading.

Globe OiLIFT Elevators cost less to install and operate. Maintenance cost is so low as compared with that of cable types that over a period of 20 years the owner will more than save the original cost of his OiLIFT elevator.

In the Globe OiLIFT, ascent is powered by an oil-operated cylinder. Descent is by gravity. The OiLIFT principle eliminates expensive penthouse construction and elaborate mechanisms.

Globe OiLIFT Elevators are custom-assembled to meet your specifications. Write today for our informative Bulletin AR-411 on passenger and freight elevators for apartments, factories, hospitals, plants, stores, warehouses.

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GLOBE HOIST COMPANY, 1000 E. Mermaid Lane, Philadelphia 18, Pa.
(Factories at Des Moines, Iowa and Philadelphia, Pa.)

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WASHINGTON

(Continued from page 318)

of the building to serve its intended purpose; (3) cost of operation and maintenance; and (4) flexibility of the building for multi-use before it finally becomes obsolete.

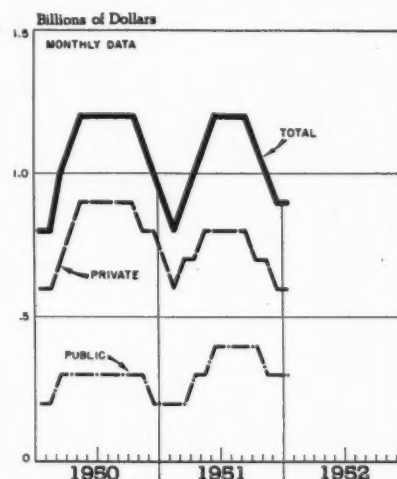
With this concept, conservation for specific emergencies involves only modifications of the general principle, BRAB continued. When considering the emergency created by the defense mobilization, advisers were inclined to believe that the present emergency might be greatly ameliorated before the study was completed. They wanted to achieve results not tied to a temporary situation, and recognized the need for establishing conservation practices applicable to non-emergency times as well as to emergencies.

Closer Collaboration Expected

It is said that one of the results of the study will be new opportunities for the federal government construction agencies to establish means for greater collaboration among their technical people. This, it is believed, will increase any trend toward the unification of government standards and practices.

(Continued on page 323)

MONTHLY DATA ON BUILDING



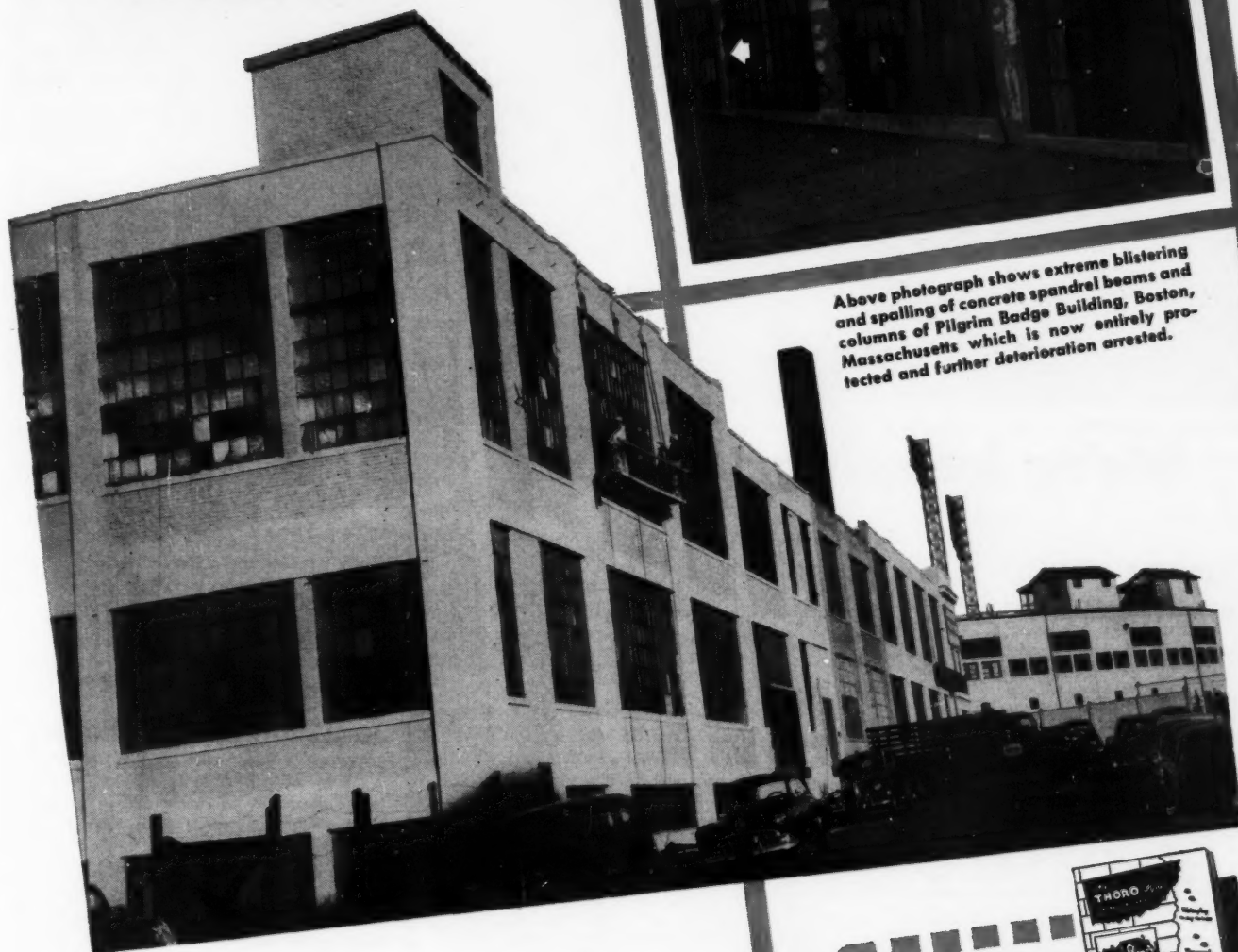
Graph from "Construction and Building Materials," publication of NPA's Facilities and Construction Bureau, gives month-by-month picture for last few years in 1939 prices

A NEW SURFACE! A BEAUTIFUL THOROSEAL SURFACE!

**PILGRIM BADGE
BUILDING**
BOSTON, MASS.



Above photograph shows extreme blistering and spalling of concrete spandrel beams and columns of Pilgrim Badge Building, Boston, Massachusetts which is now entirely protected and further deterioration arrested.



Restoration of concrete spandrel beams and other structural concrete work done by contractor Henry Gironi, Allston, Massachusetts. THORITE Patching Mortar used to seal rods and patch blistered concrete and THOROSEAL to protect surface and patched areas.

HOW TO DO IT

Get our 20-page brochure, pictorially described in detail; also, architect's chart for your wall.



Standard Dry
NEW EAGLE

**40th
YEAR**

Wall Products
PENNSYLVANIA

LOCATION:
Walter W. Gerlach Co.
Pasadena, California

ARCHITECT:
Luther Eskijian

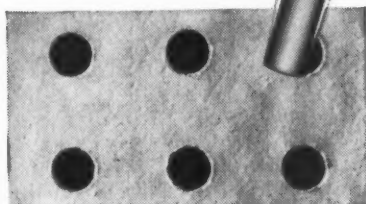
ACOUSTICAL
CONTRACTOR:
Coast Insulating Products,
Los Angeles, California



We're keeping this

QUIET

HOLLOKORE DRILLED PERFORATIONS



The Hollokore Drill (cross section sketch shown above) developed by Simpson Research and Engineering, is responsible for the clean round perforations of Simpson Acoustical Tile. In the enlarged unretouched photograph reproduced above, notice the clean-cut holes . . . no fuzzy edges . . . no loose fibers to encourage unsightly bridging when repainting.

HERE is an example of sound-conditioning and smart interior finish—both aided through the architect's wise choice of Simpson Acoustical Tile. This architect-designed office is typical of many contemporary installations that take advantage of sound-conditioning with Simpson Acoustical Tile.

In multi-officed buildings and one-man offices; in churches and schools; in all types of commercial buildings—wherever people gather—Simpson Acoustical Tile provides *better* sound-conditioning.

Refer to Sweet's Architectural File for more complete information. Contact nearest Simpson Acoustical Contractor for expert counsel.

SIMPSON LOGGING COMPANY

Sales Division, 1065 Stuart Bldg.

Seattle 1, Wash.

WASHABLE FINISH

Easily cleaned with a damp soapy cloth, then wiped with a damp cloth. New whiteness and high light reflection is quickly restored!

FINISHED BEVELS

Bevels are painted with the same washable paint, which adds so much to the smart, crisp beauty of Simpson Acoustical Tile.

HIGH SOUND ABSORPTION

Independent tests, now backed by the experience of thousands of users, show that the sound absorption of Simpson Acoustical Tile is unexcelled when compared thickness for thickness with other perforated fiber materials.

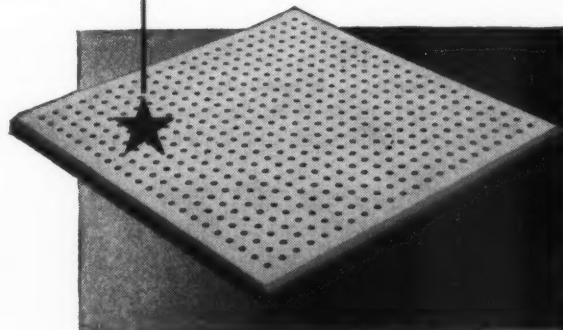
THERMAL INSULATION

Millions of tiny air pockets within the wood fibers as well as between them, act as an efficient barrier against passage of heat. Simpson Acoustical Tile makes rooms more comfortable.

Simpson
QUALITY SINCE 1895

ACOUSTICAL PRODUCTS

For Better Sound Conditioning





To keep things **QUIET** Simpson Acoustical Contractors Offer a Complete Service. Call nearest one:

- ALABAMA**
Stokes Interiors, Inc., Mobile
J. G. Whiddon, Montgomery
- CALIFORNIA**
Coast Insulating Products, Los Angeles
Hal E. Niehoff & Associates, San Diego
Cramer Company, San Francisco and Fresno
John Hass, Riverside
- COLORADO**
Construction Specialties Co., Denver
- CONNECTICUT**
W. T. Roberts Construction Co., Hartford
- DISTRICT OF COLUMBIA**
Kane Acoustical Co., Washington
- GEORGIA**
Dumas and Searl, Inc., Atlanta
- ILLINOIS**
General Acoustics Co., Chicago
Melvin R. Murdy, Moline
- INDIANA**
The Baldus Co., Inc., Fort Wayne
- IOWA**
Kelley Asbestos Products Co., Sioux City and Des Moines
- KANSAS**
Kelley Asbestos Products Co., Wichita
- KENTUCKY**
Atlas Plaster & Supply Co., Inc., Louisville
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W. T. Roberts Construction Co., Cambridge
- MINNESOTA**
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- MISSISSIPPI**
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- NEBRASKA**
Kelley Asbestos Products Co., Omaha
- NEW JERSEY**
Kane Acoustical Co., Fairview
- NEW YORK**
Robert J. Harder, Lynbrook, L.I.
Kane Acoustical Co., New York
Davis-Fetch & Co., Inc., Buffalo, Rochester and Jamestown
- NORTH CAROLINA**
Bost Building Equipment Co., Charlotte
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Harold C. Parker & Co., Inc., Oklahoma City
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- OREGON**
Acoustics Northwest, Portland
R. L. Elfstrom Co., Salem
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- CANADA**
Albion Lumber & Millwork Co., Ltd., Vancouver, B.C.
Hancock Lumber Limited, Edmonton, Alta.

THE RECORD REPORTS

WASHINGTON

(Continued from page 320)

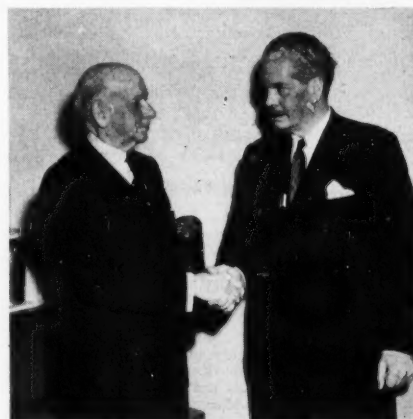
Then, a most significant BRAB observation: "Similar opportunities will be shown for bodies which formulate the standards and write the codes for civilian building practices."

The final recommendations to DPA contain items for reference to standard-making bodies, revisions suggested to existing standards and point out needs for research to modernize the technical foundations for building design and construction. They further include specific examples of engineering practice for conserving critical materials under emergency conditions without changing existing standards or codes.

Some New Standards Sought

The advance analysis of its work by the BRAB revealed that some of the advisory panel findings, particularly in the architectural field, call for new standards in space usage and plan efficiency as comparable guides for design to those which exist in other fields of building technology.

(Continued on page 324)



Walter Dorwin Teague, industrial designer, is shown receiving the title of Honorary Royal Designer for Industry from Welles Coates, Master of the Faculty of Royal Designers for Industry of the British Royal Society of Arts. Mr. Teague is founder and first president of the Society of Industrial Designers, of which he is a Fellow, and is president of the American Institute of Graphic Arts



R_x for Doctors

RECENTLY the maintenance engineer of a large hospital experienced a serious case of filter cloggitus. He was having no end of trouble in continuing to supply fresh air to the laboratories. He thought Far-Air* filters might correct the difficulty but hesitated to prescribe them without previous experience with this filter, as the staff of doctors would be highly critical if there were any noticeable decrease in filtering efficiency.

A comparative filter efficiency test was made in the hospital's air conditioning system. It proved that Far-Air filters would operate twice as long between cleanings and with less pressure loss. Also, only two-thirds the number of filters would clean twice as much air—a combined efficiency of better than 4 to 1!

A Far-Air filter installation was made, the operation was a success, and this air conditioning system recovered to the complete satisfaction of all concerned.

Qualified Far-Air engineers are available in your territory to aid you in properly solving your air cleaning problems. Write for information to Farr Company, P.O. Box 10187, Airport Station, Los Angeles 45, California.



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THE RECORD REPORTS

WASHINGTON (Cont. from p. 323)

The study further has developed opinions on non-technical conservation factors. Many of these refer to relations between the government and practicing architects-engineers who design a large volume of government construction.

Adds BRAB: constructive proposals have been made for a program that would provide opportunities for the government to make greater use of the ingenuity of the architects-engineers of

the country, accompanied by a program of research and experiments for the advancement of technical standards.

Approve Three More Practices For Materials Conservation

DPA's Follin Subcommittee on Conservation has announced three new steps toward greater conservation of critical materials.

First, it approved as good practice, the 1951 edition of National Design Specification for Stress-Grade Lumber and Its Fastenings. It recommended that government agencies and private architects, engineers and contractors be guided by its principles.

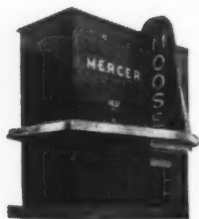
Second, the subcommittee urged that governmental and private specification writers be encouraged to provide for optional use of aluminum in lieu of copper for electrical conductors in size No. 6 (copper size) and larger. The aluminum supply is on the increase constantly as new production capacity is being put into operation, while the copper situation looks bleak for an indefinite period. Specifications of most federal agencies already place aluminum on an equal footing with copper for conductors; but in spite of this, rarely has the use of aluminum been specified directly.

Third, approval was given a booklet prepared by the Housing and Home Finance Agency and the Department of Agriculture on condensation control in dwelling construction. This, said the subcommittee, represented good construction practice adaptable to most types of building—not just housing—in peace or war.

Last fall seven standards were identi-

(Continued on page 326)

CONSTRUCTION STORY



Mercer Moose Building, Mercer, Pa.
General Contractor:
Paul W. Glenn
Erection by:
J. J. Schano,
Pittsburgh, Pa.

AS YOU LOOK at this building, you're immediately impressed with the way its entrance feature of green terra cotta Seaporcel porcelain enamel dramatically harmonizes with the rest of the structure.

A PERMANENT facing material of lasting beauty. Seaporcel blends strikingly with any background, whether brick, stone, aluminum or wood.

IN PLANNING new buildings—or making OLD buildings look NEW—architects all over America are specifying Seaporcel because they can always depend upon Seaporcel as a happy solution to the problem of economically utilizing their construction appropriation.

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Fabricating & Enamel Shop

Also manufactured on the
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Long Beach 13, Calif.

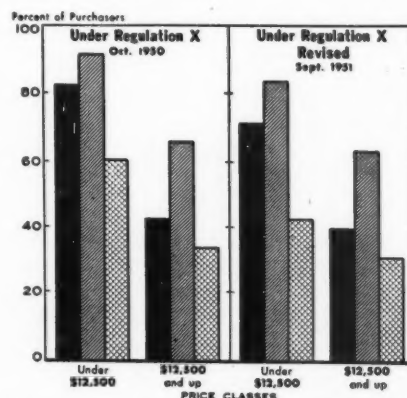


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MORTGAGED ONE-FAMILY HOUSES COMPLETED IN 10 URBAN AREAS



- All Types of loans
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The chart gives the picture for the period from October 1950, when Regulation X was promulgated, to March 1951

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Consider the record. Mississippi Wire Glass is the original wire glass upon which the Underwriter's Standard was based in 1899—the standard today by which others are judged. For over 50 years architects have specified Mississippi Wire Glass with confidence. Available everywhere from distributors of quality glass.

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Polished Wire Glass by Mississippi, approved fire safeguard, helps confine fires.



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fied as good practice in a memorandum on conservation of controlled materials in construction. The group included structural steel, reinforced concrete, lumber, plumbing, electrical work, light gage steel and floor and roof systems designed with open web steel joints. At that time it was stated that other national standards or accepted engineering practices were under study and would be announced by the subcommittee.

WASHINGTON (Cont. from p. 324)

1952 Housing Bill Stirs Old Debate on Financing

Two days of hearings on the omnibus Maybank housing bill for 1952 did little to change Congressional sentiments in the Banking Committee on the need for financial props to put the defense housing program over.

Most of the witnesses before the Maybank group supported main parts of the proposed legislation, including the

\$1.3 billion expansion of Federal National Mortgage Association operations; the Mortgage Bankers Association and the U. S. Chamber of Commerce were notable exceptions.

N.A.H.B. Vocal, A.I.A. Absent

The home builders, represented by the National Association of Home Builders president, Alan E. Brockbank of Salt Lake City, argued vigorously for the additional FNMA authorization and for the proposed increase in Federal Housing Administration loan insurance authority of \$1 billion. The builders were, naturally, opposed to any direct federal construction of housing, regardless of its character. The American Institute of Architects filed no statement on the subject, nor did it send a representative to testify.

Facilities Called Inadequate

The builders also urged that Congress speedily provide more money for defense community facilities and services. The Maybank measure called for an additional \$100 million for this purpose on top of the \$60 million already authorized in Title III of the 1951 Act.

Mr. Brockbank said that N.A.H.B. surveys disclosed that next to the shortage of mortgage funds, this problem of lack of money for building such things as sewer systems, waterworks and like facilities was most severe.

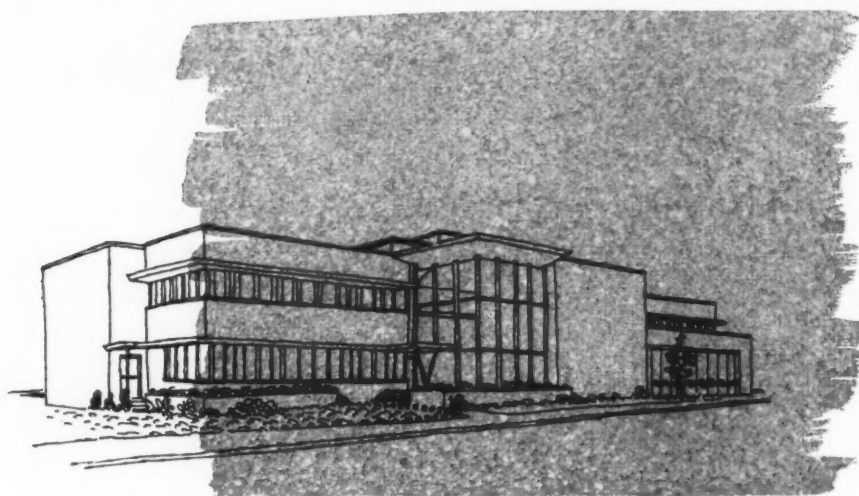
Many small communities now burdened with additional housing for defense workers or military personnel, or with such housing in prospect in some volume, were found to be without engineering capacity to figure out new installations required.

Opposing Views Heard

Somewhat opposing views were entered by W. A. Clark of the Mortgage Bankers Association and the U. S. Chamber of Commerce. Mr. Clark appeared before the committee to urge that Congress merely raise interest rates on the government-backed loans, thus, he said, solving all its current problems in connection with defense housing. The FNMA extension, he asserted, was neither wise from the fiscal standpoint nor necessary.

The national Chamber, in filing its statement with the committee, called for "more realistic" mortgage interest rates to accomplish most of what was sought in the legislation. It had no argument with the aims as outlined in the Maybank bill, but protested the methods

(Continued on page 328)



Sure, there's a colorful flat paint for
concrete!

There's a **SPECIALIZED** Wesco Paint for Every Masonry Wall

Absolutely uniform non-glaring finish...Vogue colors or pastels...no laps, streaks or blooming! That's what you get with DURASITE, Wesco's specialized exterior resin paint for dense surfaces. And DURASITE lasts years longer because it's lime-proof and "breathes" moisture vapor without causing peeling or flaking.

Just as DURASITE is the ideal paint for concrete, there's a Wesco Specialized Paint for every masonry surface—old or new, painted or unpainted, dense, porous or patched—that gives extra years of beauty and protection.



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World's Most Complete Line of MASONRY PAINTS

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Los Angeles 23, Calif. • Portland 9, Ore. • Seattle 9, Wash. • Montreal 22, Quebec

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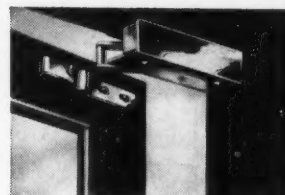
HEAVY-DUTY REVERSIBLE CASEMENT OPERATOR 4700



Operator 4700, for wood casements, is unique in several respects. It is *not* handed, and may be used interchangeably on right- and left-hand windows. Its worm and gear construction, with a one-piece gear of solid bronze, will withstand a lifetime of twists and turns. The handle—8 inches long—is removable.

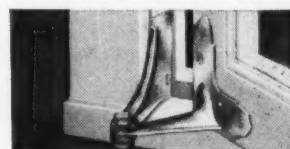
Operator 4700 functions without disturbing the screen and is a handsome bronze lacquer finished interior fixture. Its heavy brass channel guide, anchored at *three* points, will not bend or bind.

Operator 4700 is a cinch to install too. 7 screws—that's all!



AUTOMATIC CLOSER 4649

Pulls top of outswinging wood sash snugly against the frame. It prevents warping, assures all-around tight contact. Easily installed—4 screws; no mortising required.



EXTENSION HINGE 2529

By means of flange type leaf it provides a firm corner support of the sash. By providing a 4" sash clearance, it assures maximum ventilation and permits cleaning of the outside casement from inside the room.

H. S.  & Co., Inc.



3348 NORTH 10TH STREET • PHILADELPHIA 40, PA.

GETTY OPERATORS ARE USED ON MORE CASEMENT WINDOWS THAN ALL OTHER OPERATORS COMBINED.

SOUND CONSTRUCTION CALLS FOR **NELWELD** FASTENINGS

SPECIFY NELWELD FOR:

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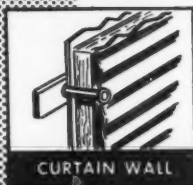
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FAST, EASY INSTALLATION
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INSULATIONS



ELECTRICAL

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Construction Application Manual

Fasten it Better...at Less Cost, with

NELSON STUD WELDING

DIVISION OF GREGORY INDUSTRIES, INC., LORAIN, OHIO

NELWELD



THE RECORD REPORTS

WASHINGTON
(Continued from page 326)

proposed to achieve these defense housing goals.

Bill Called Inflationary

Striking at the inflationary import of adding to a budget deficit already estimated at around \$14 billion, the Chamber claimed that other means exist for providing the money for defense, military and disaster housing. The bill, it stated, assumes too readily that purchase of such mortgages by the FNMA as a secondary market outlet is the only means of meeting the crisis.

"A flexible interest rate would accomplish almost all of what this bill is intended to accomplish," the Chamber statement read. "It would also solve the problem in non-defense areas. It would take care of all but the most remote and uncertain of the critical defense areas."

"Flexible" Rate Preferred

The flexible interest rate was put forward by these interests as a better method of accomplishing almost all of what the bill is intended to do.

Opposing the provision of another \$100 million for defense community facilities, the Chamber asked:

"Why, for example, should it be necessary to provide an additional \$100 million for community facilities in defense areas when only \$15 million of the original \$60 million authorization has so far been appropriated, and when it is unlikely that the whole original amount could be used before the next Congress meets?"

ON THE CALENDAR

June 24-27: 84th Annual Convention, The American Institute of Architects — Waldorf-Astoria Hotel, New York City.

Through July 6: New Talent; fourth in the series of exhibitions of work by artists who have not had major shows in New York — Museum of Modern
(Continued on page 330)

WINDOWS

BY

GENERAL BRONZE

Look at many of the outstanding architectural masterpieces of the past two decades and you'll see structures with "WINDOWS by GENERAL BRONZE."

Not surprising, then, that the architects and general contractor for the new Lever House on Park Avenue, New York City, selected General Bronze Corporation to fabricate the 1404 stainless steel windows, the spandrel frames and the architectural metalwork used throughout this distinctive new structure.

General Bronze—the world's largest fabricator of architectural aluminum and other non-ferrous metals—has been making fine windows and metalwork for prominent buildings for more than 40 years.

During these many years we have worked closely with hundreds of leading architectural firms on both large and small building projects—schools, hospitals, apartments and monumental buildings.

From this extensive experience, we have learned what features architects want in windows, spandrels, curtain walls and architectural metalwork—what kind of help architects appreciate most—what makes their job run easier and smoother.

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LEVER HOUSE, New York City
Architects: Skidmore, Owings & Merrill
Contractor: George A. Fuller Co.

Photo by Ezra Stoller



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PERMATITE DIVISION—Custom-built Windows, Architectural Metal Work and Revolving Doors. ALWINTITE DIVISION—Residential Aluminum Windows.
BRACH MFG. CO. DIVISION—Multitap T. V., Radio and Electronic Equipment STEEL WELDMENTS, INC. DIVISION—Custom fabrication in steel and iron.

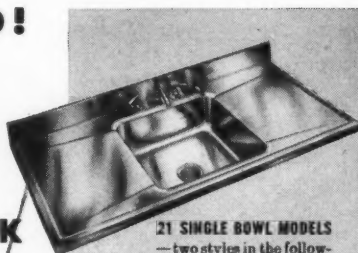
Stainless Steel Sinks

BY ELKAY

**NOW MEET EVERY
BUILDING NEED!**

50 SIZES FROM STOCK

Fifty Different Sizes Available from Stock . . .
29 double bowl sizes, 21 single bowl sizes! Lustertone double bowl sizes, for example, start at 60"—there's a size for each 6" increment up to and including 144". Custom-built convenience can now be achieved at standard sink prices. Many counter tops and return ends also available from stock.



21 SINGLE BOWL MODELS
—two styles in the following sizes:
39" • 42" • 48" • 54"
60" • 66" • 72" • 78"
84" • 90" • 96"



29 DOUBLE BOWL MODELS
—two styles in the following sizes:
60" • 66" • 72" • 78" • 84"
90" • 96" • 102" • 108"
114" • 120" • 126" • 132"
138" • 144"

NEW LOWERED PRICES

Reductions Up to 24.7%! The Demand for ELKAY Lustertone now at all-time high—economies from our greatly increased production enable us to make these significant cuts in prices. Write for the new Elkay Price List.*

THE ONLY SINK GUARANTEED TO OUTLAST THE HOME

In the kitchen, Stainless Steel is best—and ELKAY Lustertone is recognized as the finest in Stainless Steel. It never needs upkeep, never deteriorates, need never be replaced. Specify Lustertone because the lifetime cost is lower!

FOR PACKAGE UNITS. Priced and designed to work with most standardized kitchens.



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* New low prices effective May 5, 1952



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The World's Oldest and Largest Manufacturer of Stainless Steel Sinks

THE RECORD REPORTS

(Continued from page 328)

Art, 11 W. 53rd St., New York City.

Throughout the summer: Brooklyn in Progress; exhibition designed by the students of the Department of Architecture of Pratt Institute to bring to the public an awareness of the importance of planning — Brooklyn Museum, Brooklyn, N. Y.

June 1-4: Annual Meeting, American Society of Heating and Ventilating Engineers — Atlanta, Ga.

June 2-5: National Plumbing and Heating Exposition, sponsored by the National Association of Master Plumbers — Convention Hall, Atlantic City, N. J.

June 5-7: 1952 Convention, New Jersey Chapter, American Institute of Architects, and the New Jersey Society of Architects — Berkeley-Carteret Hotel, Asbury Park, N. J.

June 7: Annual Meeting, Indiana Society of Architects — Construction League, Indianapolis.

June 9-21: Triennial Meeting, International Organization for Standardization, with the American Standards Association as host — Columbia University, New York City.

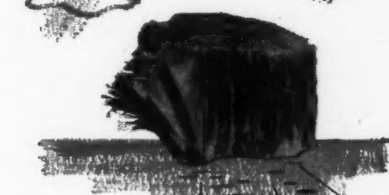
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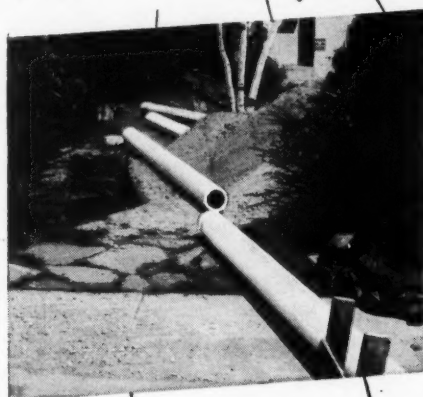
Sylvan Bien is the architect for the 20-story apartment building, "Riverview North," now under construction at the northeast corner of 82nd Street and Franklin D. Roosevelt Drive, New York

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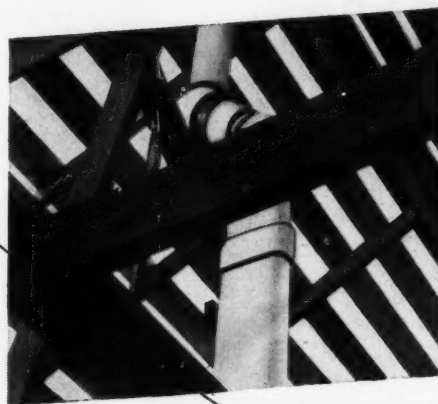
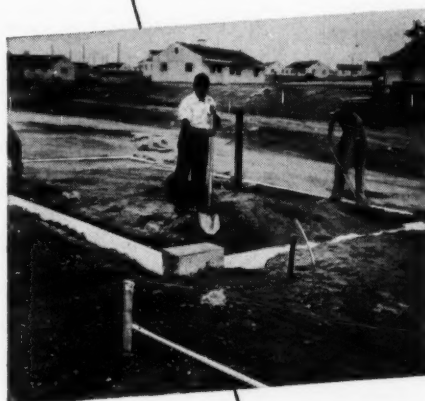


2. TRANSITE HOUSE CONNECTION SEWER PIPE

◀ The quality pipe for house sewer lines. Made of tough, strong corrosion-resistant Transite for lasting dependable service between house and street sewer or septic tank. Specially designed Ring-Tite couplings safeguard against root-clogging—long 10-foot lengths and wide choice of fittings speed installation. Ask for Brochure TR-82A.

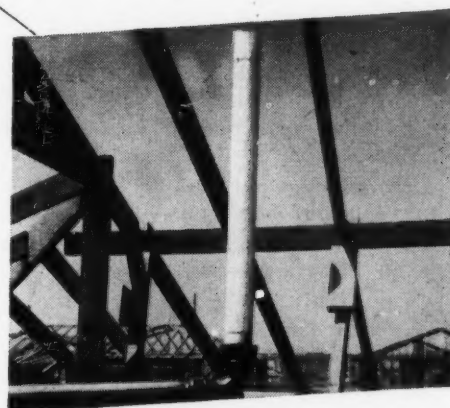
3. TRANSITE WARM AIR DUCTS

The modern duct for perimeter heating systems. Made of time-tested Transite for strength and corrosion-resistance—can't rust or scale. Long 10- and 13-foot sections, lightweight and easily assembled joints simplify handling, cut installation time to a minimum. Ask for Folder TR-111A.



1. TRANSITE FLUE PIPE

◀ The pipe that's backed by 20 years of safe, dependable venting of domestic gas appliances. More than 65,000,000 feet of this sturdy pipe are in use. Tapered Transite couplings facilitate installation—require no crimping, no hole punching, no special tools. Made in both round and oval shapes with a complete line of fittings. Listed by UL continuously since 1932. Ask for Brochure TR-13A.



4. TRANSITE PLUMBING VENT PIPE

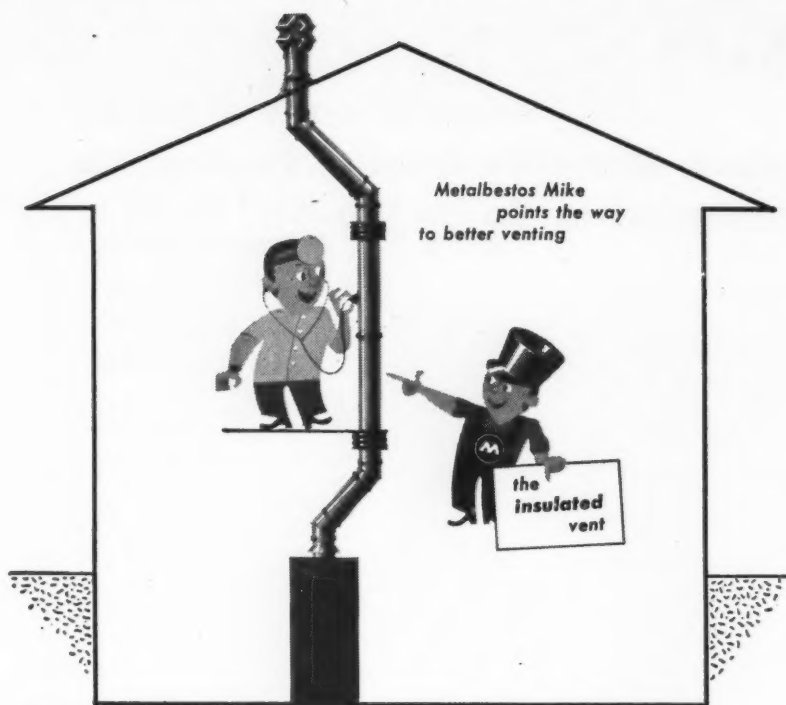
▲ Specifically designed for the dry vent portions of building plumbing systems. Its strength, durability and inherent corrosion-resistance assure lasting serviceability. Ten-foot lengths reduce number of joints, facilitate speedy, economic installation. On many jobs, a single length is all that's required. Installed in accordance with standard plumbing practices. Ask for Folder TR-107A.

For literature, address Johns-Manville, Box 60, New York 16, N. Y.



Johns-Manville TRANSITE PIPE

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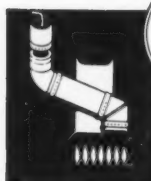
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THE RECORD REPORTS

(Continued from page 330)

June 11-26: 12th Antique Dealers' Fair and Exhibition—Great Hall, Grosvenor House, Park Lane, London.

June 16-17: Building in the Atomic Age; conference sponsored by the Department of Civil and Sanitary Engineering of Massachusetts Institute of Technology—Massachusetts Institute of Technology, Cambridge, Mass.

June 16-21: Special courses in architectural acoustics—Massachusetts Institute of Technology, Cambridge, Mass.

June 23-25: Sixth Annual National Meeting, Forest Products Research Society—Milwaukee, Wis.

June 23-24: Fourth National Businessmen's Conference on Urban Problems, sponsored by the U. S. Chamber of Commerce and the Portland Chamber of Commerce—Portland, Ore.

June 23-27: Annual Meeting, American Society for Testing Materials, exhibit of testing apparatus and laboratory supplies, and photographic exhibit—Hotels Statler and New Yorker, New York City.

June 24: Getting Design into American Building, symposium on architecture, last in the series of 12 evenings presented by the Junior Council on "The Related Arts of Today"—Museum of Modern Art, New York City.

June 11-July 27: Architecture in the New York Area, an exhibition of photographic enlargements of 16 noteworthy examples of modern industrial, commercial and residential buildings—Museum of Modern Art, 11 W. 53rd St., New York City.

June 26-28: Symposium on Earthquakes and Blast Effects on Structures; conference jointly sponsored by Earthquake Engineering Research Institute and the Departments of Engineering on the Berkeley and Los Angeles campuses of the University of California—University of California, Los Angeles.

July 10-11: Annual Indiana and Midwest School Building Planning Conference—School of Education, Indiana University, Bloomington, Ind.

OFFICE NOTES

Offices Opened

- Sol William Cohen has announced the opening of offices for the practice

(Continued on page 334)

AUTH'S "whisper-control" Nurses' Call System— a brilliant new aid to **HOSPITAL EFFICIENCY**

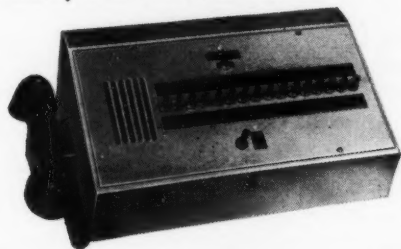


*"Like having a private nurse"
says the patient!*

*"Like having one private patient"
says the nurse!*

Yes, they're both happier—and with good reason. The patient has the psychological advantage of knowing that her smallest need will get immediate attention. She knows she will be heard when she wants to be heard even if she whispers, no matter in what direction she faces. So long as she can move her thumb and make a sound, she's sure of attention. Knowing this, she is less demanding, more relaxed.

And the Nurse? Well, she's actually been multiplied several times. Her energy and time are conserved, her spirits improved, her efficiency immeasurably increased. And so is the efficiency of the whole hospital. For that's the wonder of the new AUTH Vokacall. It's the finest single aid to hospital efficiency that was ever devised.



Nurses' control available in two styles: With speaker-microphone and telephone handset for auxiliary use . . . or with telephone handset only.

In addition to Vokacall Systems for hospitals Auth also produces standard visual nurses' call systems, doctors' paging and in-and-out systems, clock systems and operating room timers, intercom telephone and fire alarm systems, and night lights.

More information? Write for complete descriptive literature to Auth Electric Company, Inc., 34-20 — 45th Street, Long Island City 1, New York.



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Fir-Tex Tile is available in $\frac{1}{2}$ " and $\frac{3}{4}$ " thicknesses. Sizes 12"x12", 12"x24", 16"x16" and 16"x32".

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THE RECORD REPORTS

(Continued from page 332)

of architecture at 805 Shirley Ave., Norfolk 7, Va.

- Sanders & Thomas Inc. announce the opening of an office for the practice of architecture in the Security Trust Building, Pottstown, Pa. Charles S. Bicksler, Architect, is manager of the architectural department.

- Harry Soled, Architect, has announced the opening of his new office at 66 Court St., Brooklyn, N. Y.

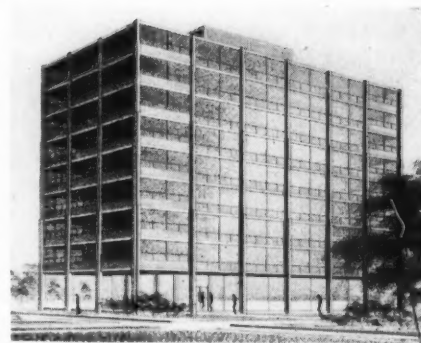
- Turner & Northington, Architects, Allen M. Northington, A.I.A., Malcolm E. Smith, Associate, announce the opening of their Huntsville office for the practice of architecture at 206 Uptown Building, Huntsville, Ala.

New Firms, Firm Changes

- The firm of Glaser and Gray having dissolved, Samuel Glaser, A.I.A., has announced that he will continue the practice of architecture and engineering as Samuel Glaser Associates at the same address, 105 Newbury St., Boston, Mass.

- Norman F. Stambaugh, A.I.A., announces a partnership with Julian C.

(Continued on page 336)

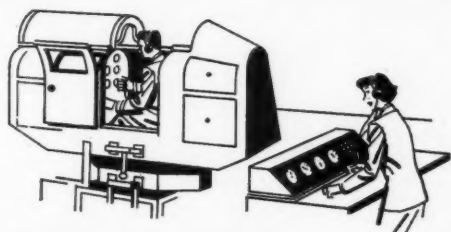


The second of three proposed apartment buildings for the students and staff of the Illinois Institute of Technology is scheduled for completion in September 1953. Photograph of rendering above shows design by Ludwig Mies van der Rohe, director of the Institute's Department of Architecture. Cost is estimated at \$1,050,000

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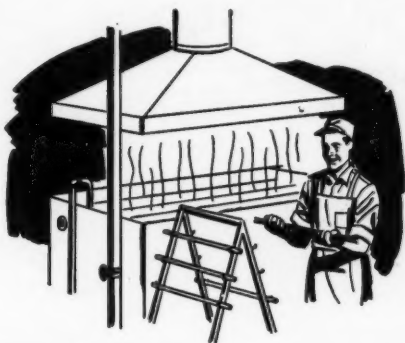
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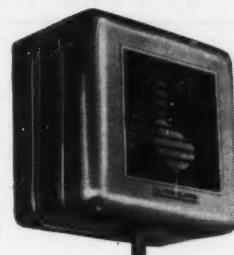
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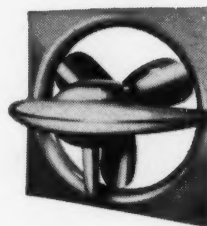
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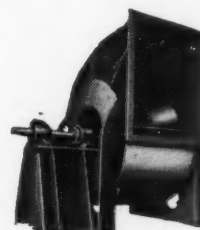
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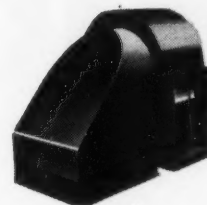
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EXPOSITION**

Convention Hall, Atlantic City

June 2-5, 1952

THE RECORD REPORTS

(Continued from page 334)

Jett, A.I.A. The firm, to be known as Stambaugh and Jett, Architects, has offices at 604 Rhodes Building, 78 Marietta St., Atlanta, Ga.

• Fred S. Dubin & Associates, consulting engineers, 1092 Farmington Ave., West Hartford, Conn., have announced the addition to the firm of Harold L. Mindell as an associate.

New Addresses

The following new addresses have been announced:

John N. Douglas, A.I.A., 3733 E. Colorado St., Pasadena 8, Cal.

S. Lawrence Klein, Architect, 17 Academy St., Newark 2, N. J.

Hermanis Martinsons, Architect, 4201 Lemmon Ave., Dallas, Tex.

Page and Franklin, Architects, 244 Post Road, Darien, Conn.

Nat S. Sachter, Professional Engineer, Suite 108, Goby Building, 1321 Bannock St., Denver 4, Colo.

AWARDS

• Clarke & Rapuano have been selected to receive the 1952 Gold Medal in Landscape Architecture of the Architectural League of New York. The firm was chosen for "distinguished contributions to site developments for housing."

The Honorable Mention Award in Landscape Architecture will go to Innocenti and Webel for their work at the Greenbrier Hotel, White Sulphur Springs, W. Va.; the entrance to Belmont Park, L. I.; and the "House of Ideas" on Long Island.

• Juan F. Nakpil, who is a member of the International Relations Committee of the American Institute of Architects, has received from President Quirino the plaque awarded by the Philippine Association of Boards of Examiners to "the most outstanding professional in architecture in the Philippines in 1951." The P.A.B.E. consists of 16 government examining boards and makes its award on the basis of a rating of candidates in each of 10 stated professional characteristics.

• Clement Roy Newkirk of Utica, N. Y., has received the 1952 Distinguished Public and Professional Service Award of the Central New York Chapter of the American Institute of Architects.

• Stanley H. Pansky of New York City has been awarded a \$3000 fellowship in architecture by the American Academy in Rome.

Mr. Pansky received a bachelor's degree in aeronautical engineering from the New York University College of Engineering in 1944 and his bachelor's degree in architecture from Harvard in 1950. His work at the Academy in Rome will involve application of aeronautical design principles to the design of architectural structures.

Mr. Pansky is now employed by Skidmore, Owings & Merrill, Architects.

• The Architectural League of New York withheld the Gold Medal in Mural Painting for 1952, but made three honorable mentions.

Awarded mentions were: Joan Miro

(Continued on page 338)



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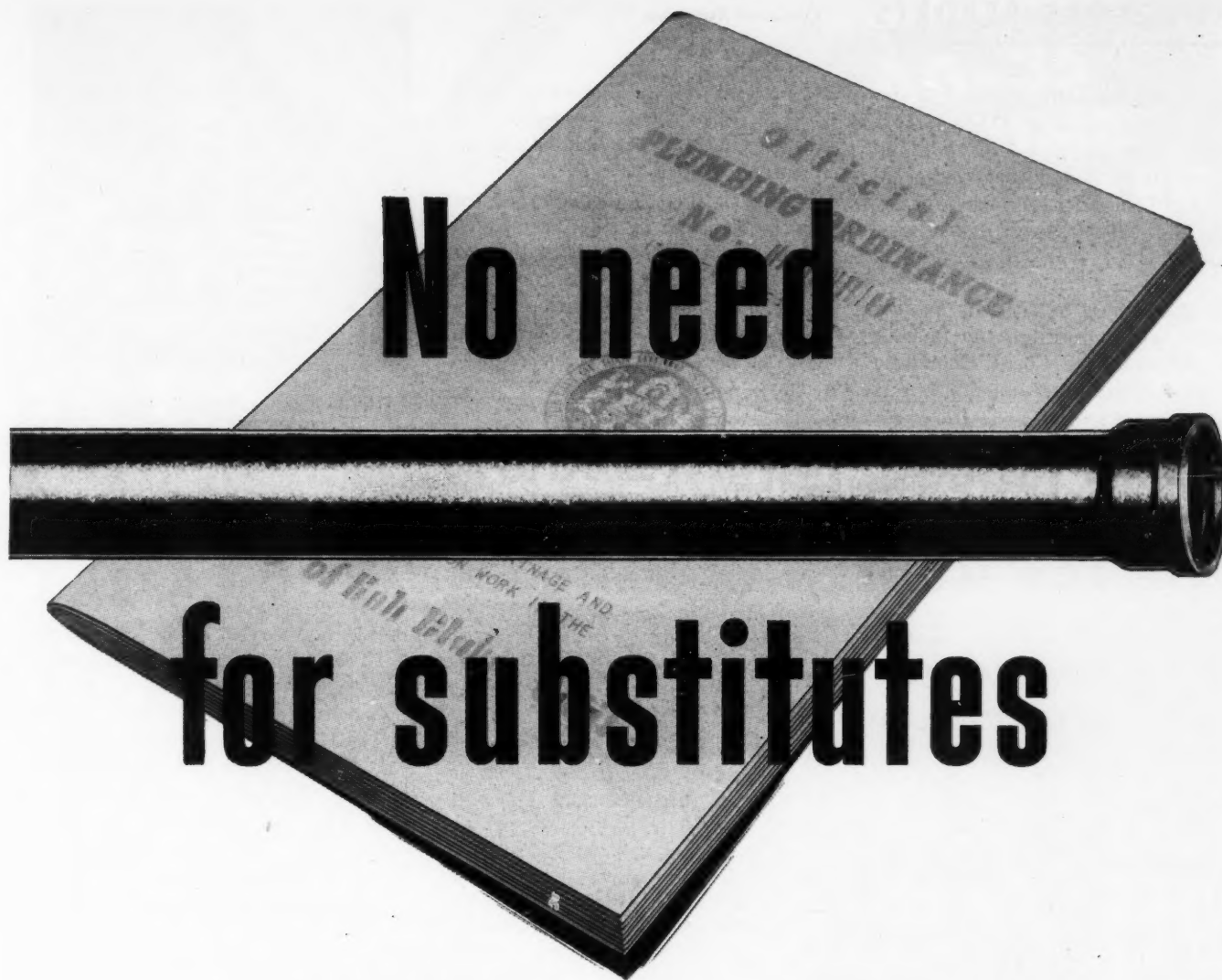
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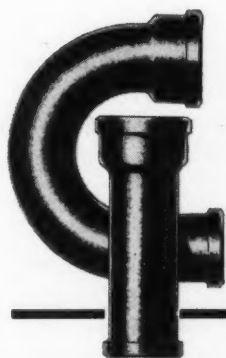
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THE RECORD REPORTS

(Continued from page 336)

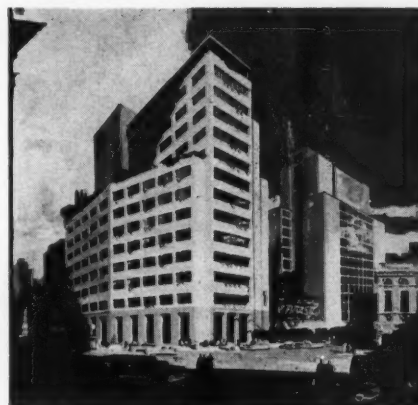
(for his painting in the Harvard Graduate Center, Cambridge, Mass.); Fred Conway (for his mural in the First National Bank, Tulsa, Okla.) and Abraham Joel Tobias (for his single painting, "The Student," in Howard University, Washington).

• *An Achievement of Christian Faith*, a booklet which describes the building and decoration of Christ Church in

New York City, has received an Award of Merit from the American Institute of Graphic Arts in the national Printing for Commerce exhibition.

The booklet tells the story of the church designed by the late Ralph Adams Cram and illustrates with color plates the elaborate mosaics completed in stages over nearly 20 years.

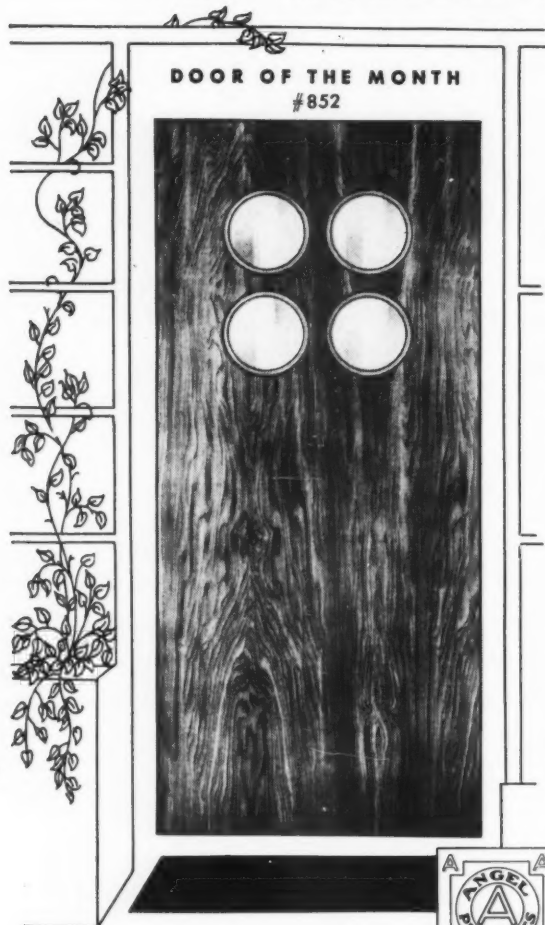
The Printing for Commerce exhibition has been seen in Washington and opens



National City Bank of New York's second Sao Paulo, Brazil, branch will include drive-in facilities. Estimated cost is \$3,000,000. Architects for the building are Welton Becket and Associates

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ANGEL DOORS—SPECIFICATIONS

- 48 Exterior Flush Door Styles
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- Faced on both sides with exterior grade plywood, bonded under high heat and pressure.
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in Chicago May 2. It will go later to cities throughout the country, including San Francisco and Portland.

Copies of the booklet are available for \$1.15 each from Christ Church, Methodist, 520 Park Ave., New York 21, N. Y.

ELECTIONS APPOINTMENTS

With the A.I.A.

• Irving Bowman has been elected president of the West Virginia Chapter of the American Institute of Architects.

Other new officers are: Paul Vaughan, vice president; Robert Greife, secretary-treasurer; and L. D. Schmidt, director for 1952-54.

• Central Texas Chapter, A.I.A., officers have been elected as follows: Lee R. Buttrill, Temple—president; Winfred Gutafson, Austin—vice president; Martin Kermacy, Austin—secretary; J. Roy White, Austin—treasurer; and Arthur Fehr, Austin—director.

• Terrell R. Harper heads the Dallas Chapter of the A.I.A., with Clifford J. Lane as vice president, William H. Hidell Jr. as treasurer, J. Herschel Fischer as secretary and Arch B. Swank, director.

• Pasadena Chapter, A.I.A., has elected the following officers: Scott Quintin, president; R. E. Langdon Jr., vice

(Continued on page 340)

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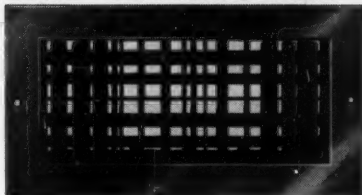
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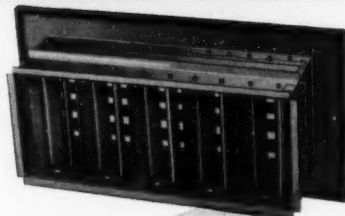
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PERFECT 4-WAY AIR CONTROL

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SIMULTANEOUSLY IN OPPOSITE
DIRECTIONS—CLOSE TO ANY
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TO FULL CLOSED

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THE RECORD REPORTS

(Continued from page 338)

president; Robert L. Deines, secretary; Lee Kline, treasurer; and Wallace C. Bonsall, Boyd Georgi and John Douglas, directors.

• Several changes in Army District Engineer appointments have been announced.

Col. Benjamin B. Talley became North Atlantic Division Engineer at New York City when Col. F. F. Frech

retired at the end of March. Colonel Talley has been assigned to the Office of the Assistant Chief of Staff, G-2, Washington, D. C.

Col. Robert P. Kline has been appointed district engineer for the Chicago District of the Corps of Engineers. Colonel Kline, who has been in charge of military construction at Fort Ritchie, Md., replaces Col. Jack P. Campbell. Colonel Campbell has been assigned to

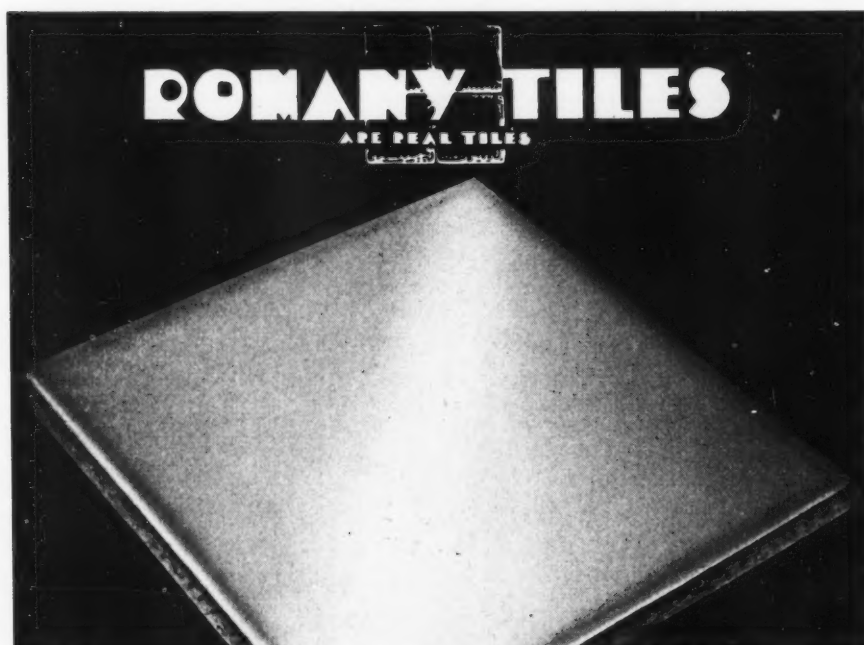
the Mediterranean Division, French Morocco.

• Col. Vere A. Beers has been named Engineer Inspector General in charge of the newly established Chicago Office. Colonel Beers' assignment follows the recent announcement by Secretary of the Army Frank Pace Jr. that Inspector General's offices will be established by each of the technical services of the Army as part of an improved system for inspecting Army procurement and property-accounting activities.

• Miss Hilla Rebay has been appointed director emeritus of the Museum of Non-Objective Painting in New York following her resignation as director because of illness. A new director was not immediately named.

• John C. Taylor Jr. of New York was reelected president of Prefabricated Home Manufacturers' Institute at the Association's ninth annual meeting in Chicago. He is president of American Houses Inc.

Other officers reelected for the next year are: William B. F. Hall, Fort Wayne, Ind. — vice president; and Robert E. Ott, Port Washington, Wisc. — secretary-treasurer. Mr. Hall is president of General Industries Inc., and Mr. Ott is general manager of the Harnischfeger Corporation (Houses Division).



POINTS OF EXCELLENCE (3)

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AT THE COLLEGES

New Architecture Director Is Appointed at Princeton

Robert W. McLaughlin Jr., a member of the architectural firm of Holden, McLaughlin & Associates, of New York, has been appointed director of the School of Architecture at Princeton University.

Mr. McLaughlin, who will assume the post next fall, succeeds Prof. Sherley Warner Morgan. He will continue to practice architecture, with offices in New York and Connecticut.

Professor Morgan, who retires this month, has been closely associated with the school since its establishment in 1920 and director since 1928. He is a Fellow of the American Institute of Architects and a former president of the Association of Collegiate Schools of Architecture.

Mr. McLaughlin, also a Princeton graduate, was a founding partner of his

(Continued on page 342)

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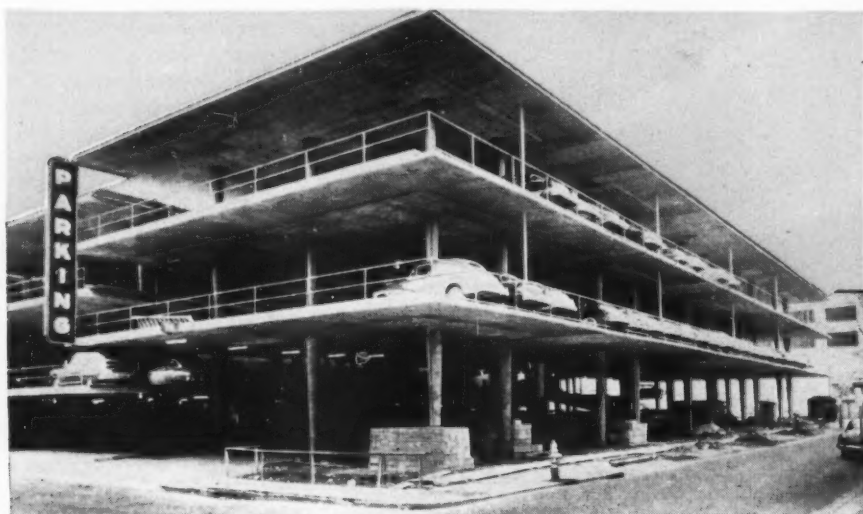
(Continued from page 340)

present firm in 1930. After getting his M.F.A. at Princeton in 1926 he spent a year as Proctor Traveling Fellow in Italy, France and England and began the practice of architecture in 1928 with H. Beuren Magonigle. He was associated with the late Charles Over Cornelius in archaeological and restoration work.

Mr. McLaughlin is the holder of some 30 patents for improvements in building

construction and has been the architect for more than 30,000 housing units. He has published monographs on Brick Architecture of Sweden and San Gimignano, besides contributing articles to professional journals.

The new director is a member of the A.I.A. and of the executive committee of the Architectural League of New York and a trustee of the Beaux Arts Institute of Design.



New Orleans parking garage, built in 30 units, cost only \$400 per car space. Unit is a 32' slab cantilevered on columns spaced 16'. Overlapped cantilevers between units span 32', make space for another car. In cross section slabs are 66'3",

columns spaced 20'. Hinging columns at base eliminated bending moment, allowed tapering to gain space. Laurence G. Farrant, consulting engineer; Diboll-Kessels, associate architects-engineers; G. F. Favrot & Co., contractors.

A car for every 200 sq. ft. — all within 3 minutes of the street

Designed to provide quick-access parking for as many cars as possible within its site dimensions, this garage was built at extremely low cost in a series of 30 independent units, each a flat slab cantilevered on tapered columns hinged at their base, with overlapped cantilevers doubling the span between units.

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\$5000 Beaux Arts Scholarship Won by N. C. State Student

North Carolina State College put a double feather in its cap when students of the school scored both as winner and alternate for the 1952 Lloyd Warren Scholarship in Architecture offered by New York's Beaux Arts Institute of Design.

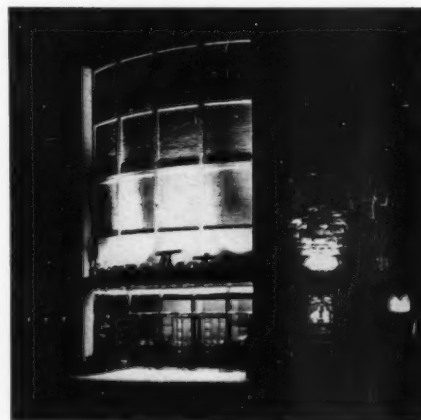
Winner of the \$5000 award for study and travel both abroad and in the United States was Edward H. Shirley, and runner-up was Charles H. Boney. The winner of the 39th Paris Prize scholarship tallied over 11 other finalists who had previously been narrowed from 56 original competitors for the prize.

In two preliminary exercises, contestants had to present complete solutions within 48 hours for the problems "A Major Railroad Station" and "A Concourse of a Large Railroad Station." The final problem, for which a week was allowed, was the design of a university engineering school.

(Continued on page 344)



Day and night views of entrance of Ridgeway Theater, a unit of the Ridgeway shopping center in Stamford, Conn. Alfons Bach designed the whole project

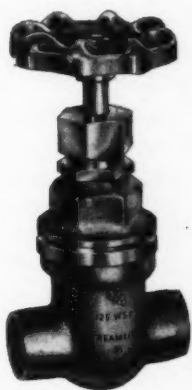


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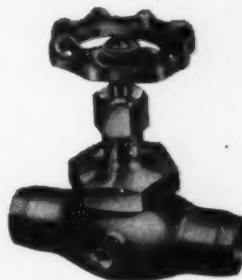
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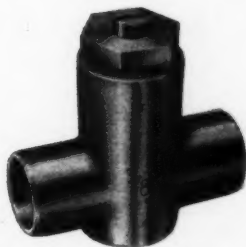
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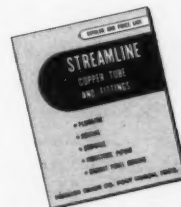
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(Continued from page 342)

Mr. Shirley was trained at Clemson A & M and the University of Illinois, and is registered in South Carolina. Mr. Boney is a graduate student at North Carolina State.

Judges for the competition were Walker O. Cain (Chairman), Charles Beeston, Giorgio Cavaglieri, Harmon H. Goldstone, Jules Gregory, Walter H. Kilham, Jr., Jedd S. Reisner, Daniel

Schwartzman, Benjamin Lane Smith and Arthur S. Douglass, Jr.

MINE WORKERS' FUND BUILDS TEN HOSPITALS

Selection of three architectural firms and most of the sites for building of ten

community hospitals in West Virginia, Virginia and Kentucky was announced last month by the United Mine Workers' Welfare and Retirement Fund. Three non-profit memorial hospital associations had been established especially for the projects in each of the states.

Contracts have been signed with the associations by the firms of York and Sawyer, Isadore Rosenfield, and Sherlock, Smith and Adams. The hospitals will be located in the general areas of Harlan, Cumberland, Hazard, Pikeville, Whitesburg and McDowell, Ky.; Beckley, Logan and Williamson, W. Va.; and Coeburn, Va.

Largest single hospital will be at Beckley, W. Va., and will hold a minimum of 200 beds. It will be designed by Isadore Rosenfield.

The other hospitals will all be smaller. York and Sawyer will design structures at Williamson and Man (near Logan) West Va., and near Pikeville and

(Continued on page 348)



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We have no dollars now. But if we come to the States we will pay for it, and will tell you our experiences from Germany and the USA. We are contributors to German papers and could write together with one of your editors interesting articles ("Germans see American architecture").

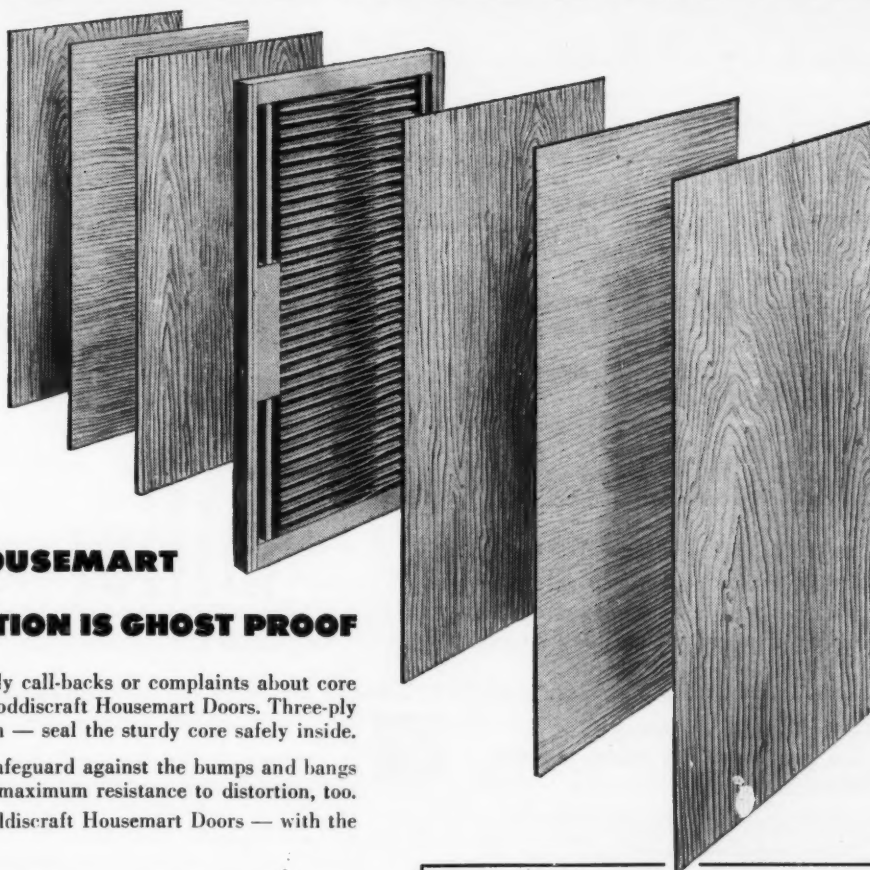
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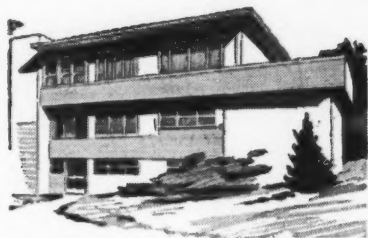
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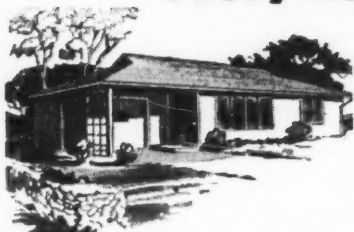
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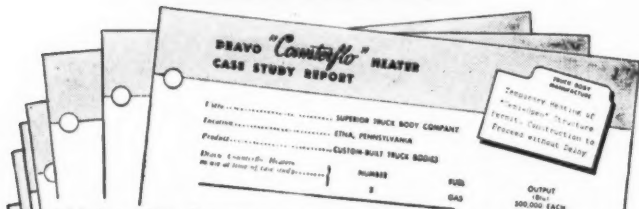
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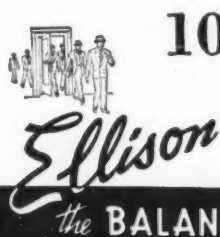


THE RECORD REPORTS

(Continued from page 344)

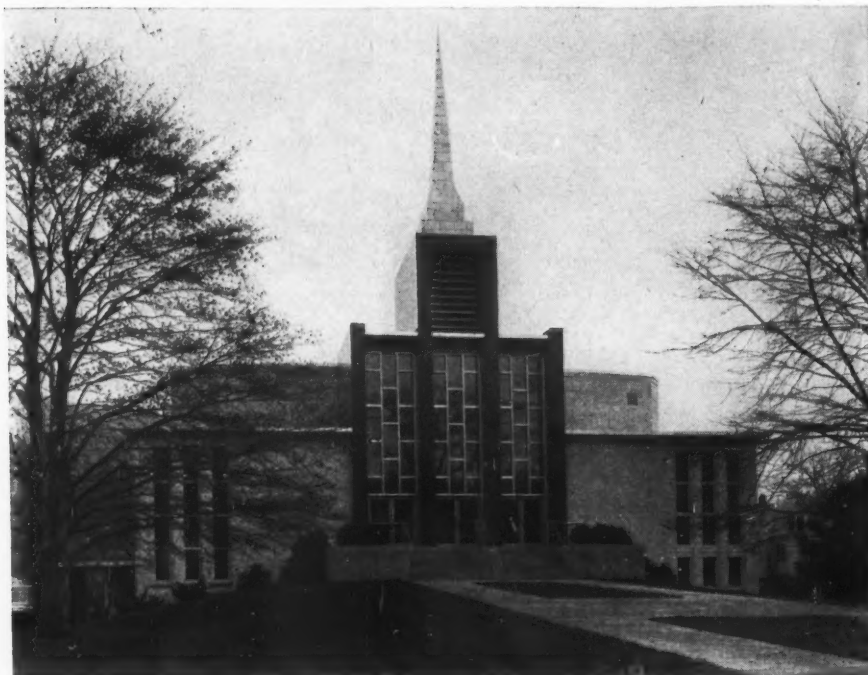


N.A.H.B. members confer with J. MacMurray, chief of staff to Senate Banking and Currency Committee. Seated: Frank Burns, Denver; President Alan E. Brockbank, Salt Lake City; Mr. MacMurray; Emanuel M. Speigel, 1st vice president. Standing: John M. Dickerman, legislative director; Herbert Colton, counsel



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Medical administrator of the program will be Dr. Fred D. Mott.

E. J. C. PLANS DELEGATION TO PAN-AMERICAN GROUP

A delegation made up of representatives of each of the member societies of Engineers Joint Council is scheduled to attend the third Congress of the Pan-American Union of Engineering Societies in New Orleans, August 25-30.

The New Orleans meeting is third in a series which began in Rio de Janeiro in 1949 and continued in Havana in 1951. Purpose of the Union is to provide an organization which will encompass the engineering societies of both North and South America and promote their activities on an international scale.

Completion of the organizational work of the group is expected at the August session.

Representatives of engineering societies of nineteen Western Hemisphere countries including the United States and Canada are expected to attend.

STATE MENTAL HOSPITALS CONTINUE OVERCROWDED

In spite of new construction, overcrowding is continuing in many state mental hospitals, according to the Public Health Service of the Federal Security Agency.

In a report based on a survey by the National Institute of Mental Health, PHS points out that nearly 700,000 persons were patients in mental hospitals in 1949.

The 207 institutions which supplied the data for the survey indicated that the degree of overcrowding was almost as high as in the preceding year. Actual occupancy amounted to 18.1 per cent over the rated capacity; 118 patients for every 100 hospital beds and attendant facilities. In nine states overcrowding was reported to be 30 per cent or more.

The survey also indicated that southern and western states have relatively fewer facilities than northern and eastern states; New York, for example, provided care for 5.6 patients per 1000 population as compared to 1.7 for New Mexico.

(Continued on page 352)

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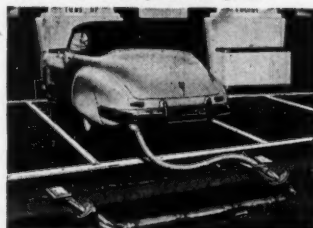
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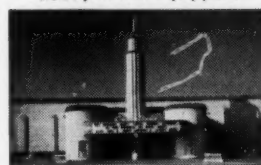
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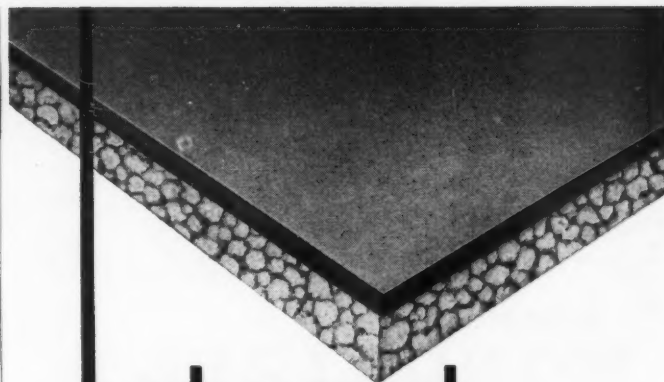
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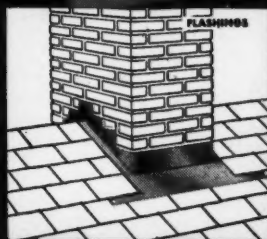
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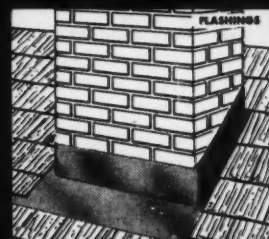
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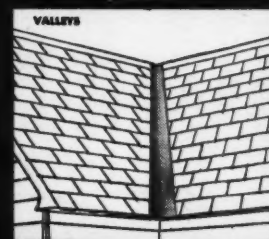
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THE RECORD REPORTS

(Continued from page 348)

HOME BUILDERS REACH TO TOMORROW'S HOME BUYERS

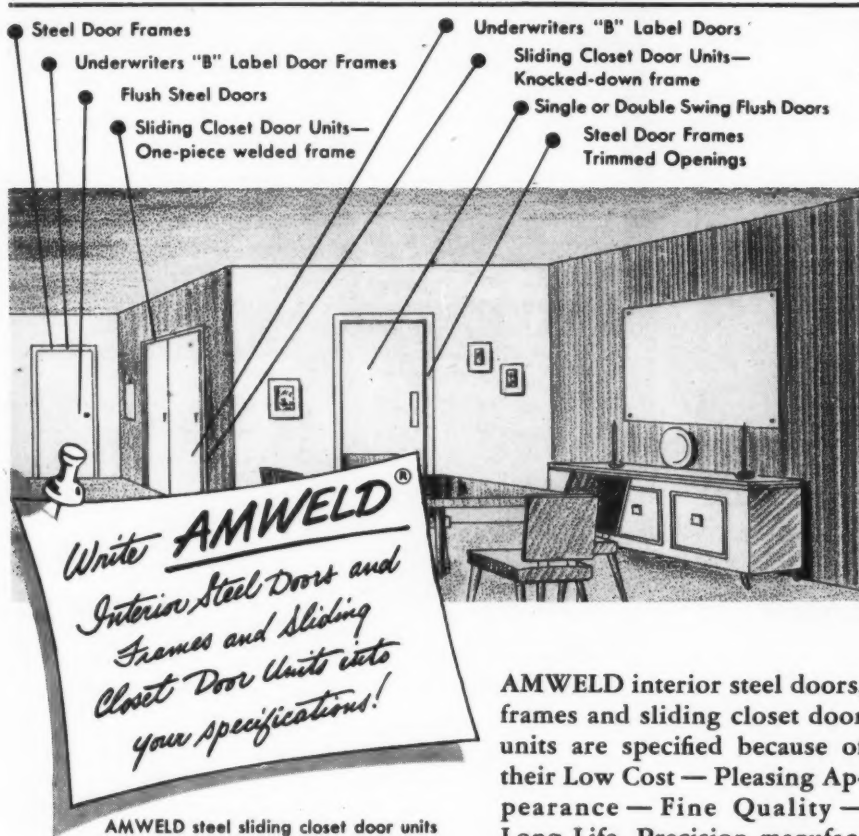
An educational program for public schools — to acquaint tomorrow's home buyers with basic facts about the building industry — has just been launched by the National Association of Home Builders.

"Better Homes for Family Living," an eight-page "lesson" for use of teachers

in intermediate and upper grades, has just been issued by N.A.H.B.

The three-color brochure, illustrated throughout with sketches, presents building industry information in easily understood language for all elementary grades.

Most of the booklet is devoted to a classroom play depicting the search of a typical American family for a new home.



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'51 ARCHITECTURAL INDEX COVERS FIVE PERIODICALS

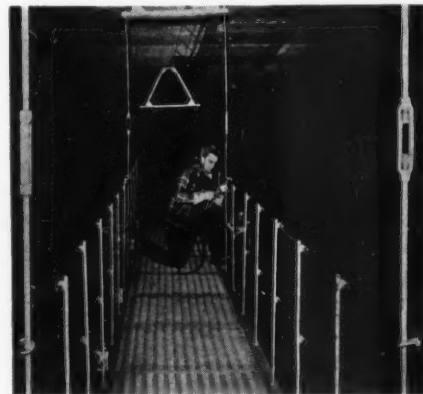
The Architectural Index for 1951, now available, offers a key to articles published in five periodicals in the field during 1951.

Material is indexed by building type, by subject matter (i.e., heating and ventilating, lighting) and in some cases geographically (i.e., California).

There is also an alphabetical list of architects and designers, with a list of work of theirs published in any of the periodicals covered.

The magazines indexed are: *Arts and Architecture*, *ARCHITECTURAL RECORD*, *The Magazine of Building*, *Interiors*, and *Progressive Architecture*.

Copies of the *Index* are available from
(Continued on page 356)



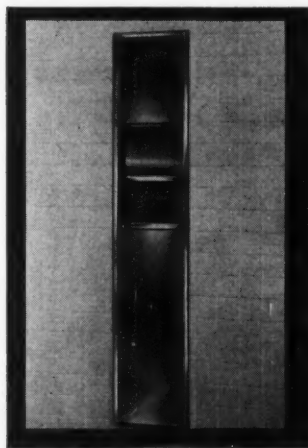
A steel walkway 367 ft long with five crosswalks, each 71 ft long, is suspended from the domed ceiling of the recently-completed Minnesota State Fair Grounds Hippodrome in St. Paul to provide access to service fixtures. Architects: Kindy F. Wright & Associates



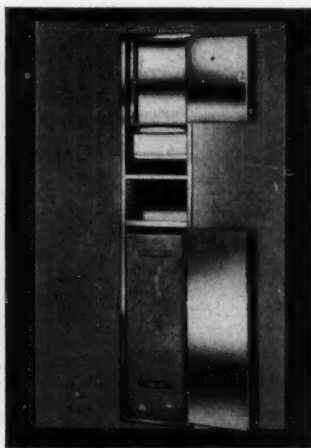


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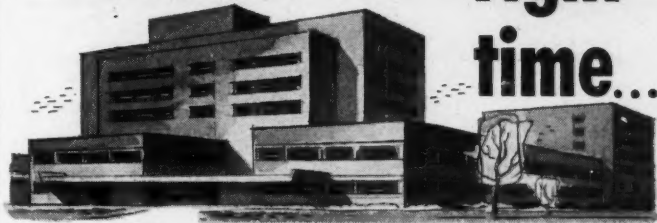
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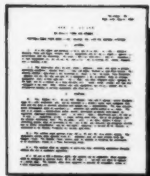
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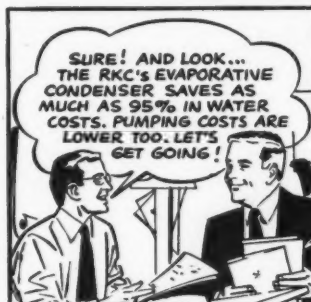
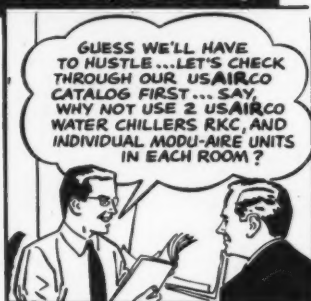
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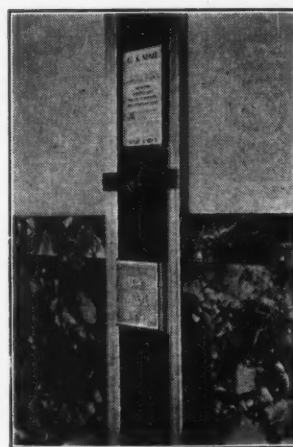
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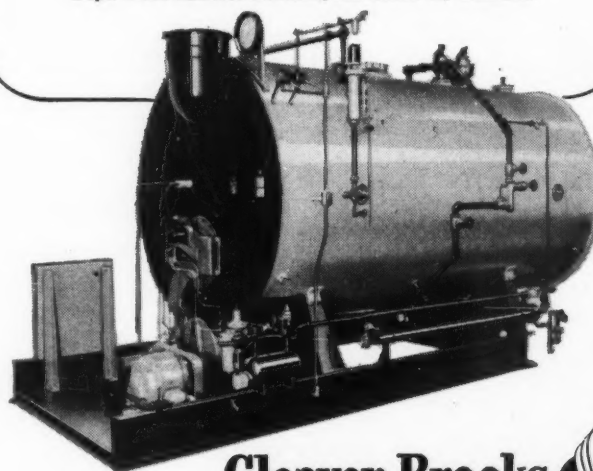
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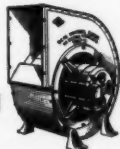
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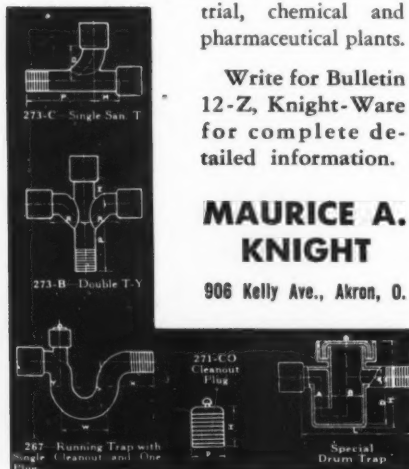
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THE RECORD REPORTS

(Continued from page 352)

The Architectural Index, 5532 Kenwood Ave., Chicago 37, Ill.

BUSINESS MEN INVITED TO URBAN PROBLEMS SESSIONS

Businessmen and city officials from all over the country will be invited to take part in the fourth National Businessmen's Conference on Urban Problems in Portland, Ore., June 23-24.

The conference is sponsored by the United States Chamber of Commerce, in cooperation with the Portland Chamber of Commerce.

The idea, as in the earlier conferences, is exchange of experience in handling problems of city traffic, parking and slum clearance. Participation from the floor will be particularly stressed.

CHESTER GODFREY DIES; CRAM & FERGUSON HEAD

Chester N. Godfrey, senior partner in the architectural firm of Cram & Ferguson, died May 6 at the New England Medical Center in Boston. He was 74 years old.

Mr. Godfrey, who entered the firm in 1900, had been associated with the design of such buildings as the Cathedral of St. John the Divine in New York, chapels at Princeton University and West Point and the Boston University campus. He also took part in planning the John Hancock Mutual Life Insurance Company Building and the New England Telephone Company building, both in Boston.

Mr. Godfrey was a member of the American Institute of Architects.

HENRY A. JOHNS

Henry A. Johns, 76, one of the founders of the Washington, D. C., Building Congress and former manager of the F. W. Dodge Corporation Washington office, died March 19 at his home in Washington after a long illness.

Mr. Johns retired from Dodge eight years ago after 32 years with the company. He was a member of the National Press Club, the White House Correspondents' Association, the Washington Board of Trade and was the only mem-

(Continued on page 360)

OnTop!



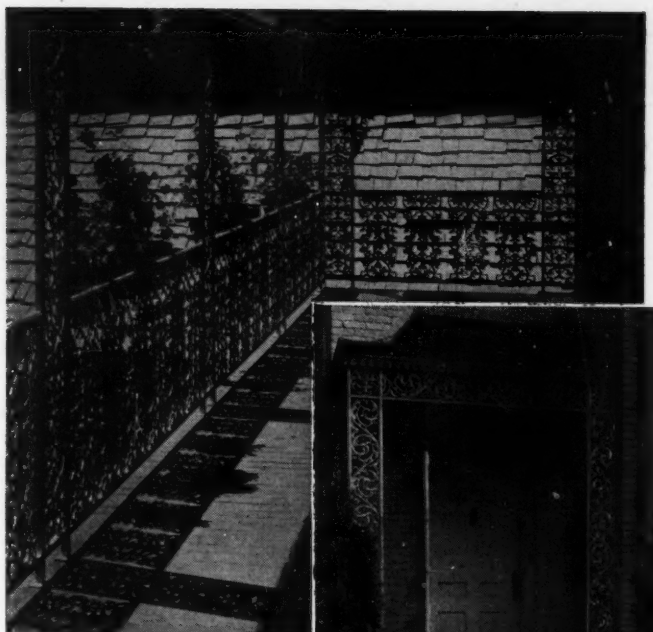
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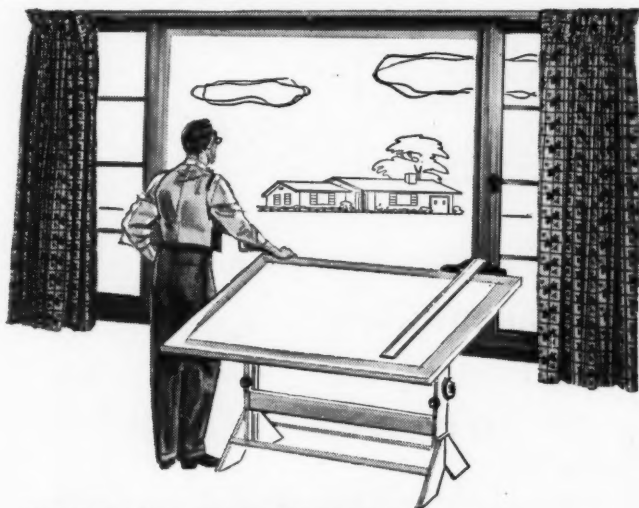
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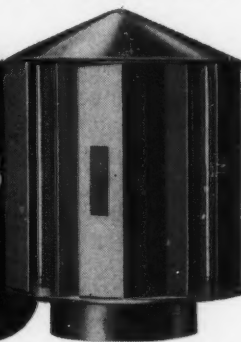
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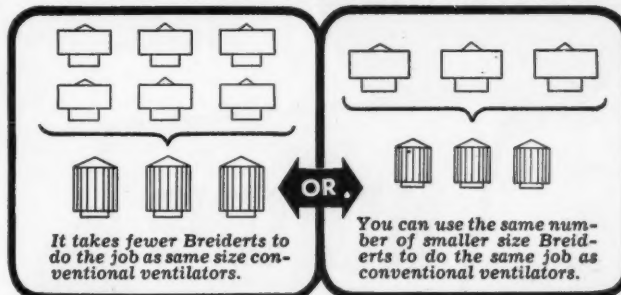


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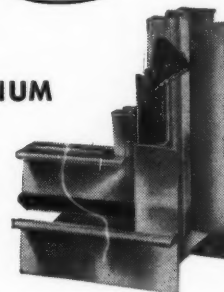
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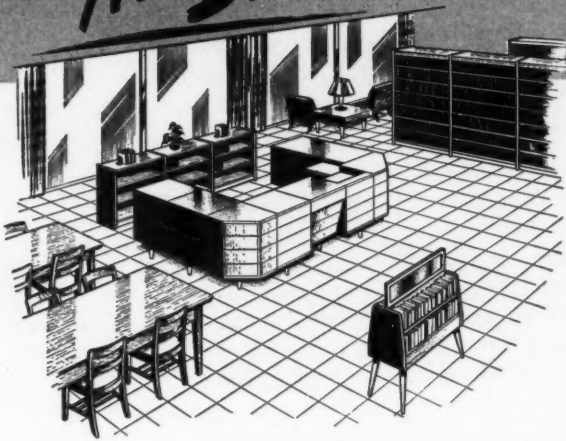


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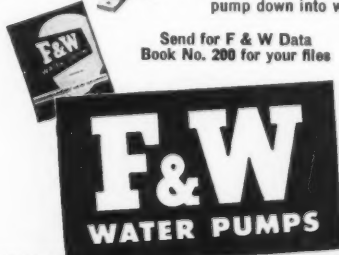
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THE RECORD REPORTS

(Continued from page 356)

ber emeritus of the Board of Governors of the Washington Building Congress.

The Building Congress adopted a resolution honoring Mr. Johns at the Board of Governors meeting March 24.

ADDENDA

• In an article on the Bessemer Improvement Company office building in Greensboro, N. C., Edward Loewenstein, architect, in the April 1952 issue, the caption on page 140 incorrectly describes the inserts on a fireplace shown in a photograph on page 141. The inserts are not marble but a product of the Mabie-Bell Company. They are thin concrete slabs having an exposed aggregate surface which is mosaic in character.

• Raymond Loewy Inc. should have been credited for preliminary design of the J. W. Robinson Department Store in Beverly Hills, Cal., as shown on page 372 of the March 1952 issue of the RECORD. Pereira and Luckman were architects-engineers.

• Lewis J. Sarvis of Battle Creek, Mich., was architect of the \$2,000,000 Kellogg Center for Continuing Education at Michigan State College. Two views of the center were shown on pages 364 and 366 of the February 1952 issue.



Tolbot Hamlin, editor and contributor for Columbia's new four-volume Forms and Functions of 20th Century Architecture, examines the set on publication day. Left to right: Charles Proffitt, Columbia University Press director; Dean Leopold Arnaud, Columbia School of Architecture; Mr. Hamlin; Grayson Kirk, vice president and provost

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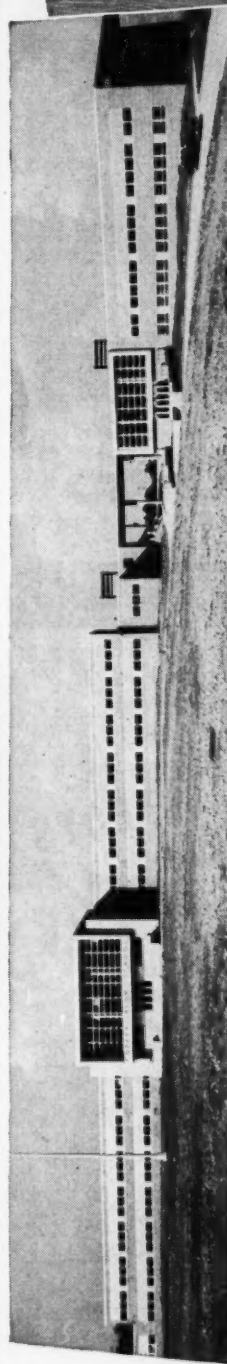
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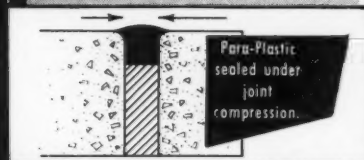
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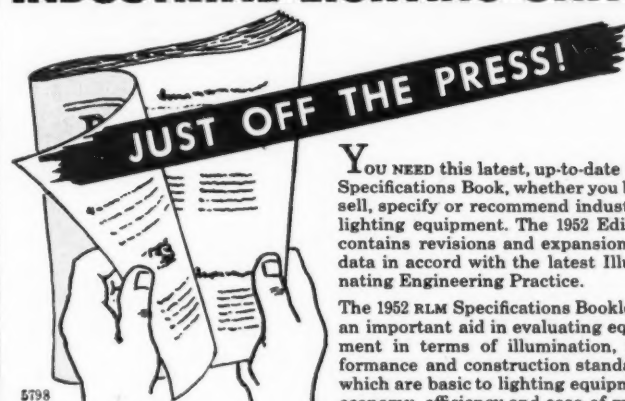
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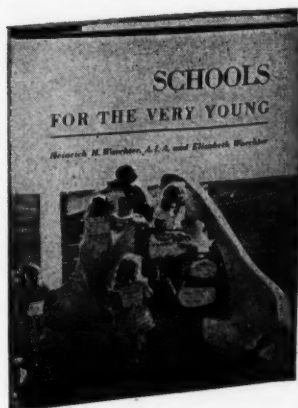
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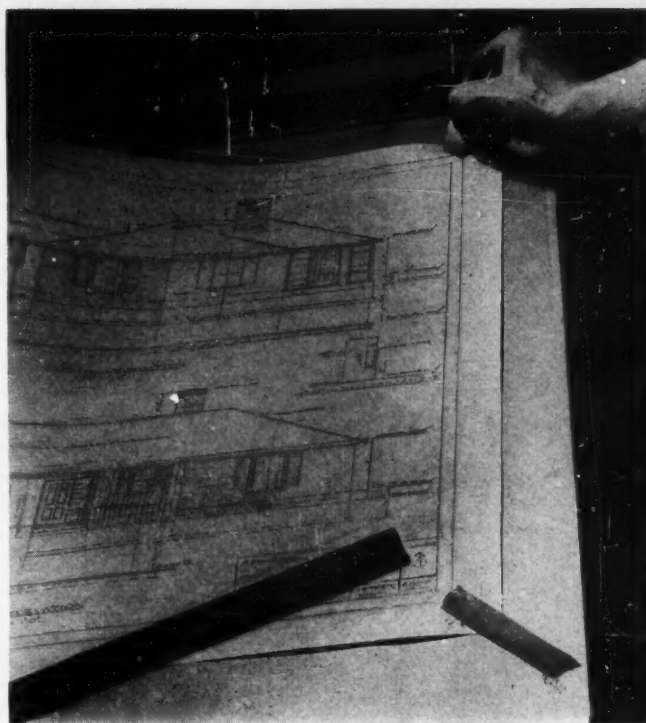


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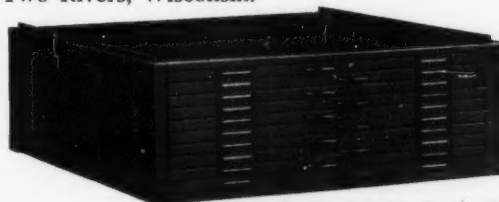


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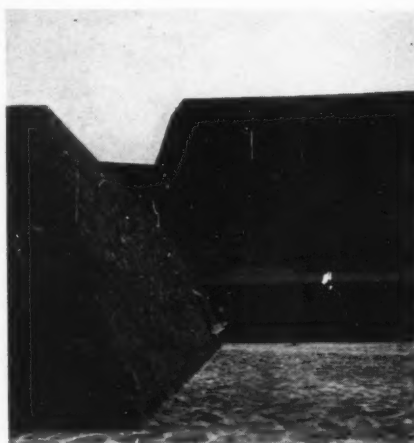
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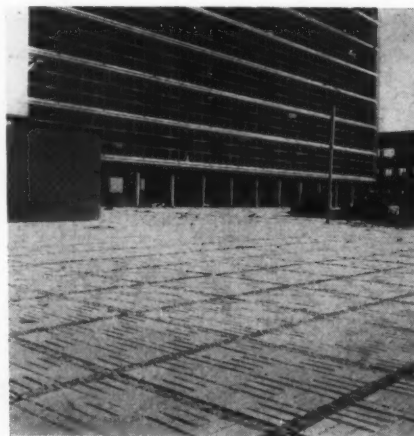
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Erwin G. Lang

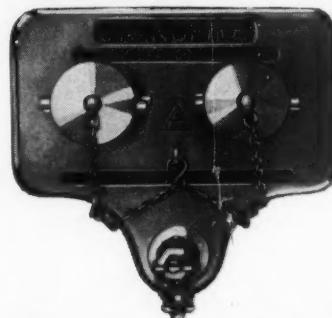


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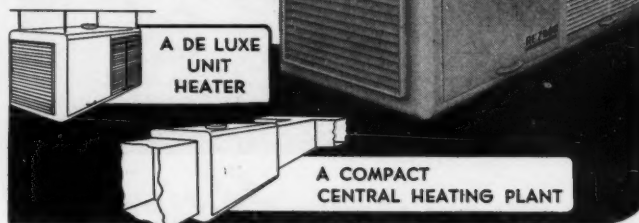
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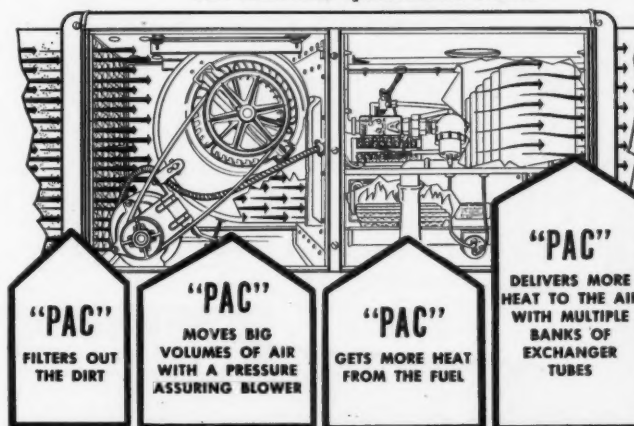


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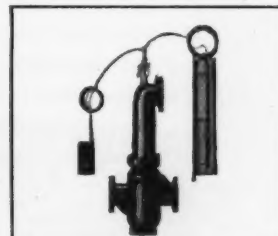
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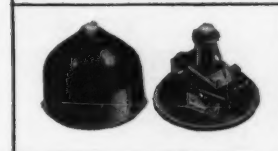
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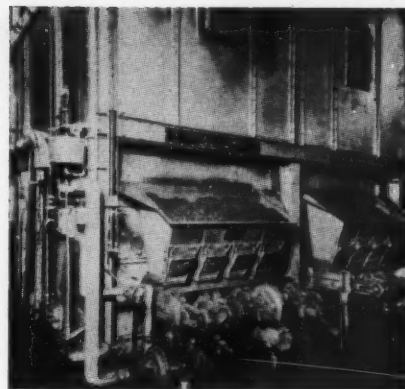
book establishes. So it is perhaps futile to try to evaluate it completely now. One is tempted instead to point out smaller details that are carried through with excellent organization, logic and common sense. Here, for instance, is a scholar who happily subscribes to the stylistic simplicity of early Georgian and late Georgian, before 1750 and after. It is refreshing likewise to read a writer who does not mumble when he comes to such perennial problems as the reason for the overhang or "jetty" in the early house, the jointing of a log cabin, the Dutch and Flemish roofs, and the sources of the Cape Cod cottage and the Monterey house.

Only the fact that some of the 485 cuts are gray and foggy lends a touch of disappointment to the printing, when the photographs were plainly selected with such care to be the central feature. But this is hardly the particular fault of the author of this book. The costs of illustrated art and architectural studies in the postwar period have been rising too fast. The time is ripe for technological improvement and a consequent reduction of expense over the whole field. Each new volume makes this more apparent.

BOOKS RECEIVED

Modern Hospital Planning in Sweden and Other Countries. By Gustaf Birch-Lindgren. Published in co-operation with the Swedish Institute for Cultural Relations. Medens (Stockholm, Sweden) 1951. American distributors: Architectural Book Publishing Co., Inc. (New York, N. Y.) — A practical handbook in hospital construction for not only architects but doctors, superintendents, trustees, board members, local and national authorities. The book treats problems of planning and construction from the local point of view with especial attention given to hospital planning which has resulted from the organization and functioning of Sweden's highly specialized and developed system of hospital and medical care. A comparison of American and Swedish hospitals shows how an exchange of ideas and methods can be of mutual benefit.

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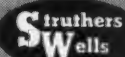


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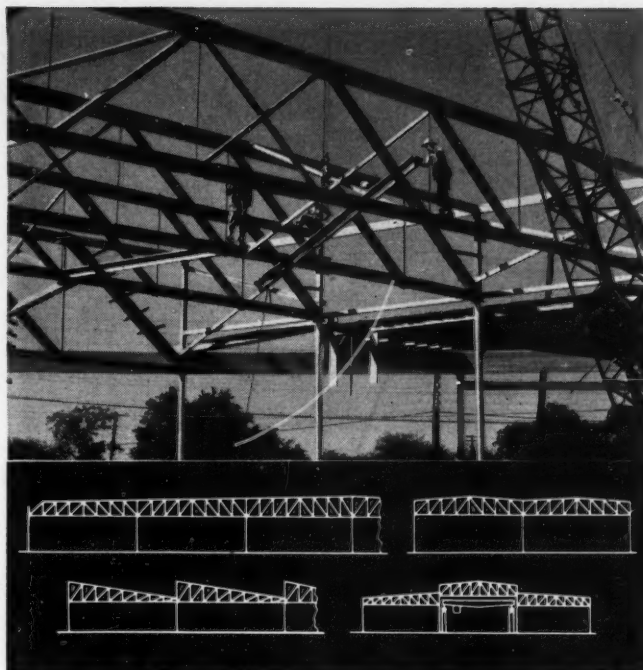
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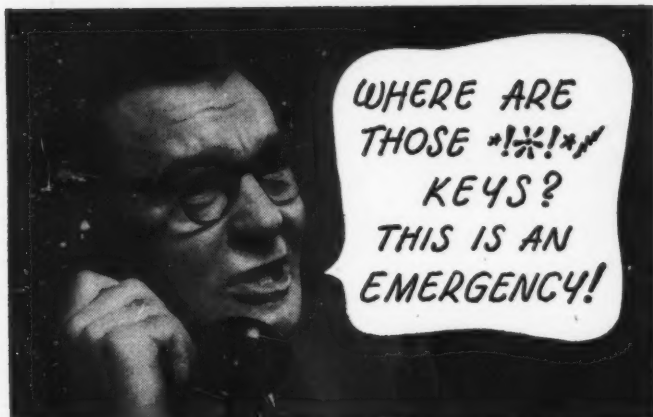
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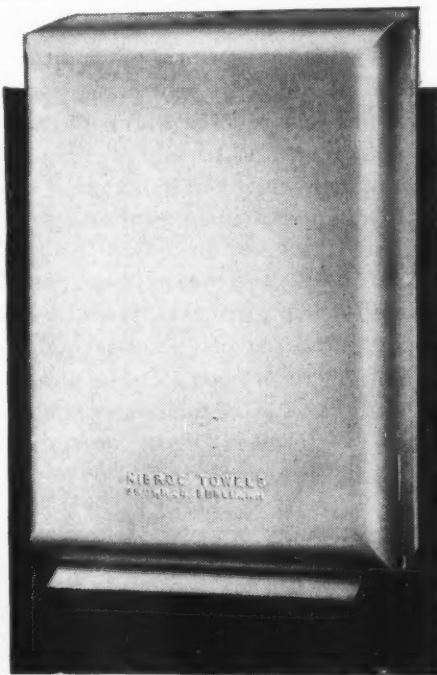
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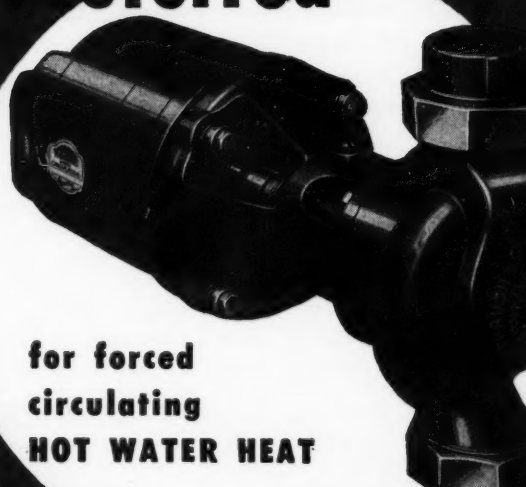
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enlarged by Harold G. Lorsch. *Frederick Ungar Publishing Co. (New York, N. Y.), 1952* — Four-place influence line tables designed to lessen the drudgery of the engineer by reducing calculating work required for the analysis of continuous beams under dead and live loads, the book contains tabulated moment diagrams for concentrated and uniformly distributed loads, live load positions for maximum and minimum moments and shears, and a detailed introduction with numerical examples.

The American House Today. By Katherine Morrow Ford and Thomas H. Creighton. *Reinhold Publishing Corporation (New York, N. Y.), 1951* — 380 photographs and 120 plans covering 85 examples of all types of today's American house from Connecticut to California. The accompanying text explains the architect's problems in designing a house, as well as the reasons for the planning and building of each house.

Parliament House: The Chambers of the House of Commons. By Maurice Hastings. *The Architectural Press (London, England), 1950.* First published in the *United States in 1952* — A "place-history" of the Palace of Westminster, explaining with text and illustrations the direct continuation of the tradition starting in 1547 — when His Majesty's Commons were given St. Stephen's Chapel — which is responsible for the form of the new Chamber of the House of Commons.

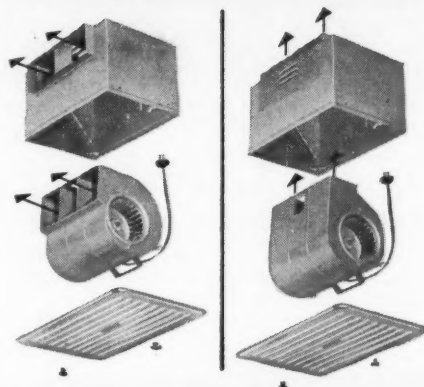
Building Practice Manual. By Roy W. White. *D. C. Heath and Co. (Boston, Mass.), 1952.* Trade Edition Distributors, Reinhold Publishing Corporation (New York, N. Y.) — A book for both professionals in the building trade and home owners which includes sections on mathematics and quantity estimating of building materials. A description of modular coordination and tabulated data are also included.

NEW EDITIONS

A Handbook of Perspective Drawing. By James C. Morehead and James C. Morehead, Jr. *Elsevier Press, Inc. (Houston, Texas), 1952* — A second and revised edition of a book that grew out of studies undertaken at Carnegie Tech with the aim of finding a simple, shortcut method for teaching perspective drawing.

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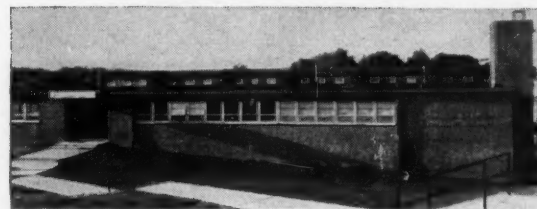
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TEMPERATURE CONTROL

Notes

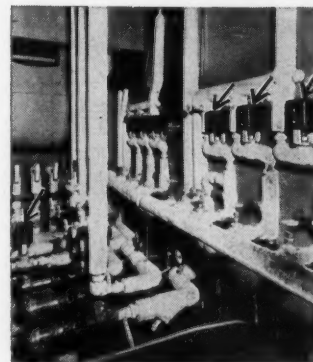
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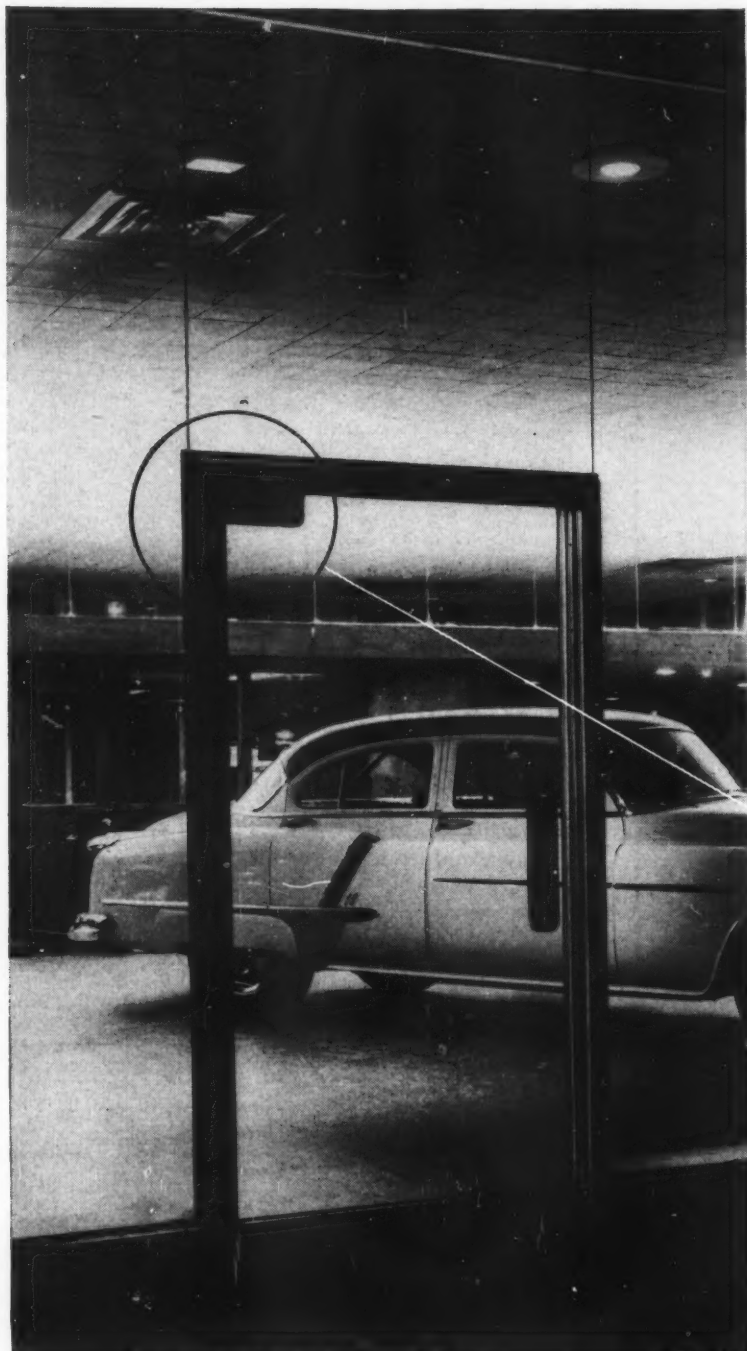
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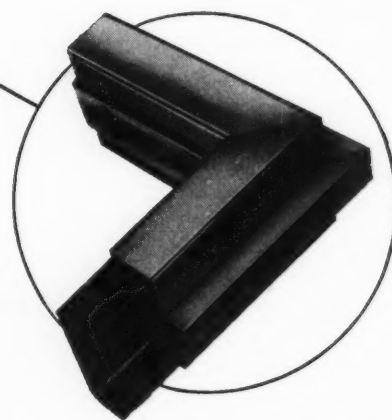


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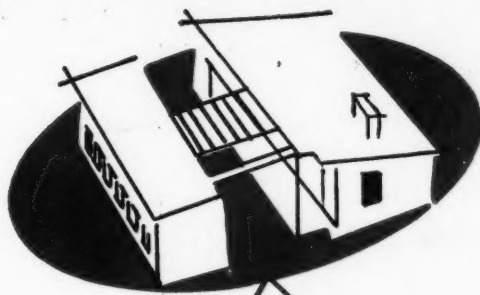
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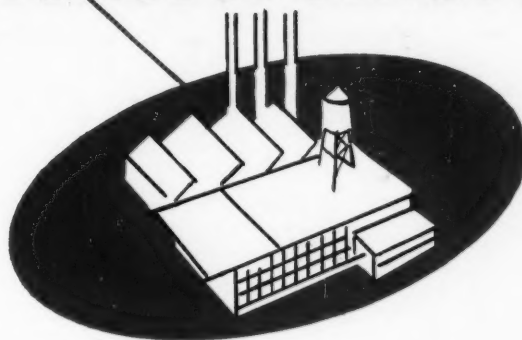


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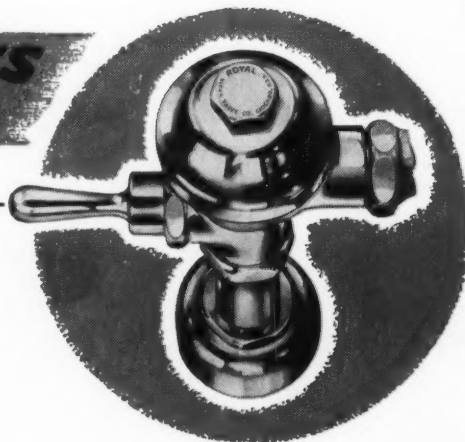
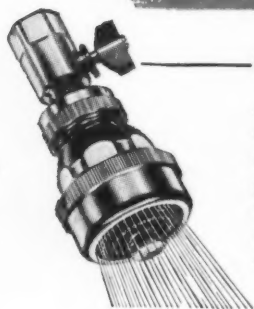
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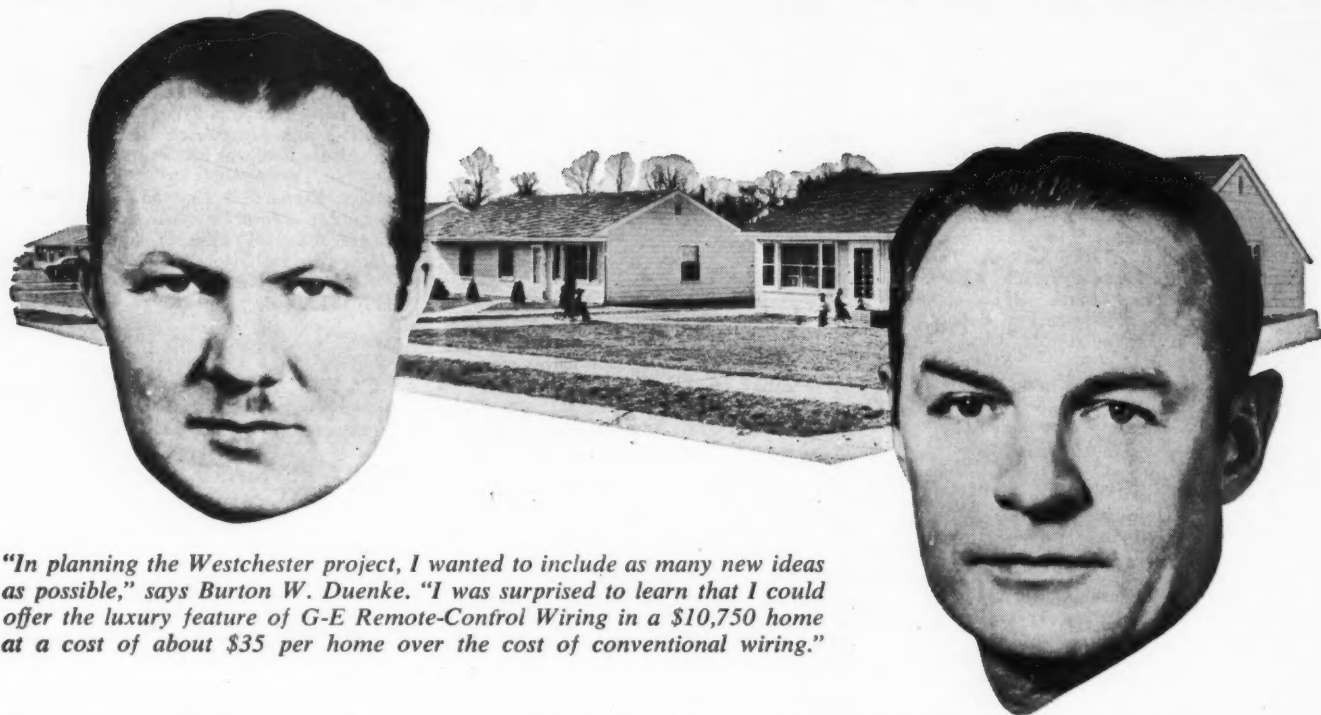
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